Soap

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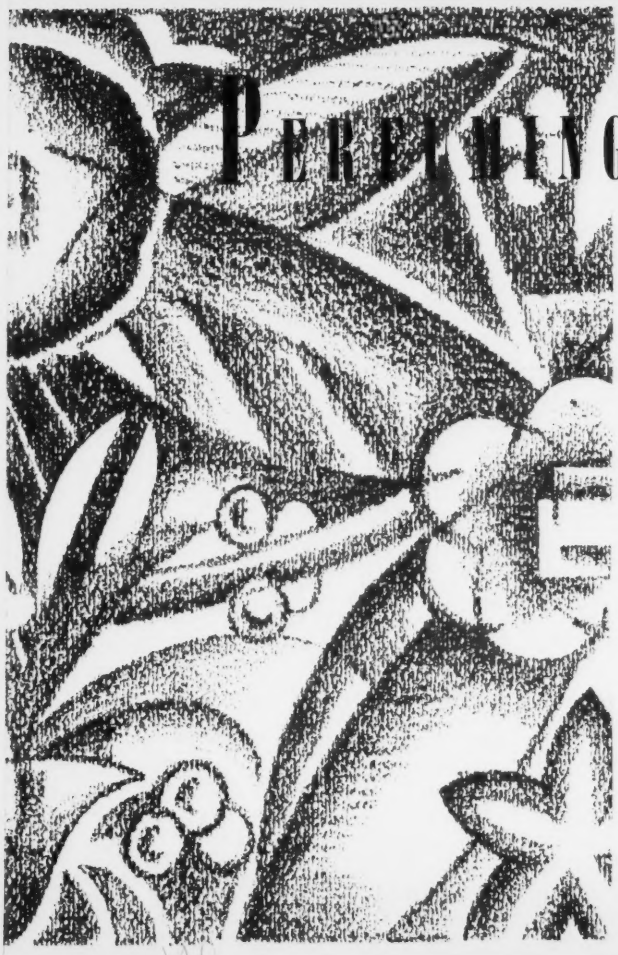

PERFUMING MATERIALS *for* SOAP MAKERS

IF you want your Soap Products and Insecticides sheathed in perfuming materials which persist and which will play an important part in sale and re-sale . . . then it's the Ungerer type of materials which you require.

Remember . . . the Ungerer product derives from select sources, it has successfully passed all of our rigid tests, it is correctly priced . . . and it is a product of Enduring Quality.

Avail yourself of the full benefits of Ungerer products . . . consult us when next you are in the market for perfuming materials.

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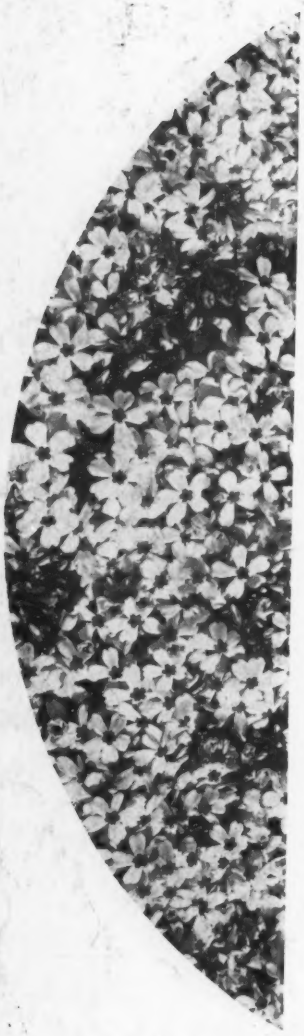
and Sanitary Chemicals

Soap Perfumes



ODOR is perhaps the most important factor in the successful merchandising of toilet soaps. Competition being what it is today, the up-to-the-minute soap manufacturer is insisting on the very best possible perfume available, at a price within reasonable limits.

Our laboratories, based on the long experience of our principals Chuit Naef & Cie., Geneva, Switzerland, are turning out remarkably fine floral and bouquet odors for toilet soaps at surprisingly low figures.

Included in our most recent successful developments are GARDENIA, JASMIN, GERANIUM, LAVENDER, LILAC, FOUGERE, BOUVARDIA, MUGUET, ROSE, DAMASCENA, and numerous bouquet types.

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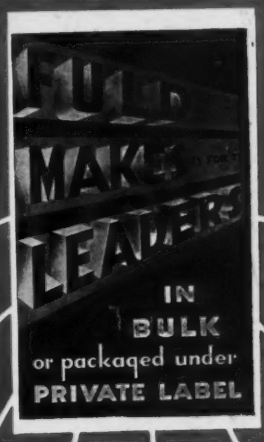

Every Fuld dealer owns his own complete line, which only he can sell to consumers.

INSECTICIDES vs. Multiplication

The multiplication methods of the 1938 crop of insects can never show a balance against the subtraction records of Fuld Insecticides. Build your insect sales season on our economical and selective treatments for FLIES, MOTHS, ROACHES, ANTS, and other insects.

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The Fuld line of Pine, Chlorine and Coal Tar base disinfectants is always true to form and true to formula. When you sell a Fuld Disinfectant, you are selling a guaranteed germ-killing strength rated on F. D. A. prescribed methods of tests.

BREVITEE Metal Polish —The Fast One!

Brevitee takes off everything necessary and shines in next to nothing at all. This new speed polish is now racing around the country showing more luster per can and more repeat sales per customer.
Brevitee is the abbreviation for work—even sales work.

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"Alkali-proof" is the new word in cleaning that takes more responsibility off the cleaning squad and more dirt off the surface. "Alkali-proof" means that Fulshine is safer for cleaning all fine flooring materials and painted surfaces. This powerful cleaner makes all cleaning handicaps easier.

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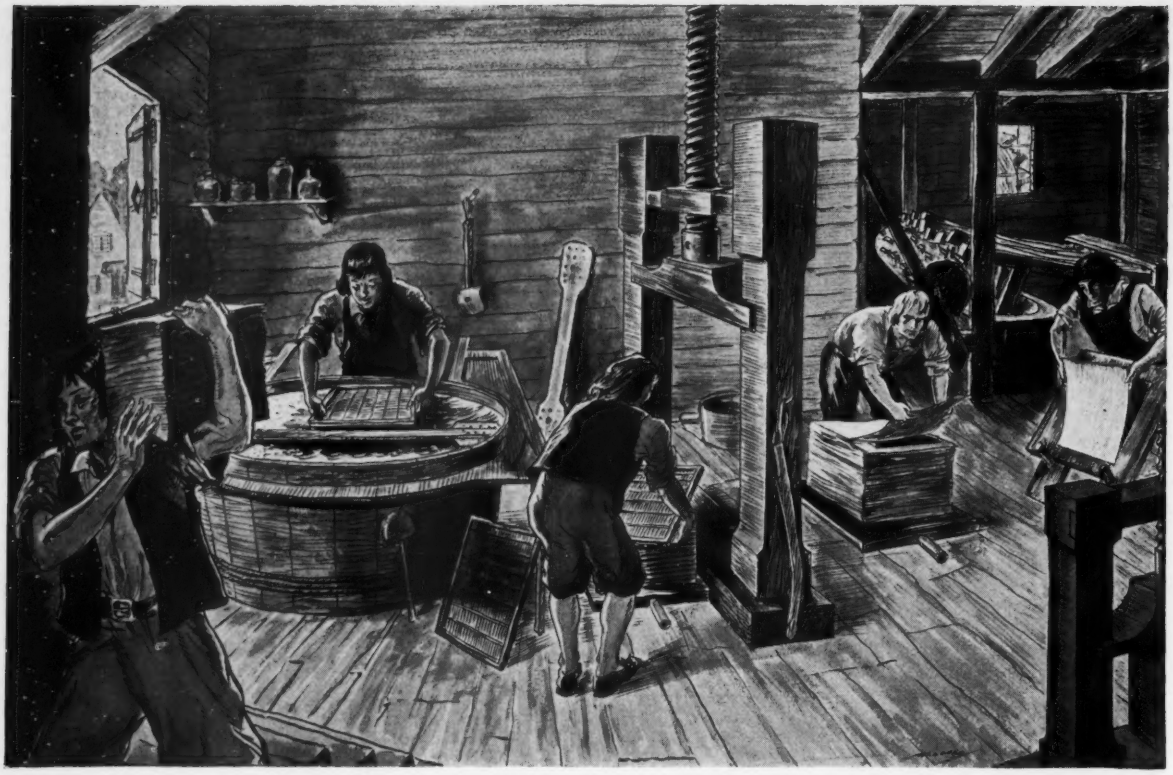

Through The Centuries With Alkalies

The first paper mill in this country was built in 1690 at Germantown, Pa. resulting from the needs of the Philadelphia printer William Bradford and the arrival of the German paper maker, William Rittenhouse. In paper making, soda ash and caustic soda have long played a prominent part. Bleaching thru the use of liquid chlorine, another alkali product, is largely responsible for the tremendous revolutionary advance in the use of wood pulp for paper manufacture.

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Soap and Sanitary Chemicals

Volume XIV
Number 7

July
1938

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NOSE . . . Your nose will tell you in a moment that here are exotic outstanding cakes as far above the average as expensive nationally advertised perfumes are superior to the 5 and 10 variety.

EYE . . . Scentinels catch the eye. Dressed in flower designed cellophane to match the delightful odors. Packed 12—4 oz. cakes in a distinctive silver-blue tube, 12 tubes to a carton. Imprint labels if desired.

EAR . . . When you hear the attractive price you will be surprised. Because of outstanding appearance and value, Scentinels are bound to boost your profits. Jobbers are reporting sales increases of 100 and 200%.

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M M & R SOAP & INSECTICIDE NEWS

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2

SUBSTITUTE WITHOUT SACRIFICE

FOR EXPENSIVE OIL SASSAFRAS
substitute inexpensive
Perfume Oil 413

It has a clean fragrance and imparts a residual odor like that of Safrol. For the most economical method of using this exclusive M M & R specialty, let us know your requirements.

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Andro MM&R or Jeral MM&R

Users of Oil Citronella will discover marked economies in the use of Andro M M & R or Jeral M M & R as recommended by M M & R chemists. A test will prove that, though inexpensive replacements for Oil Citronella, they are notwithstanding equal to the finest quality of Citronella in pungency. In character both Andro and Jeral are midway between Citronella Ceylon and Java. Jeral is advised for soaps because it has a lasting, subdued fragrance. For all other purposes Andro is more suitable because of its definite top-note odor. Neither fluctuate in price, quality nor strength. Send for testing samples today!

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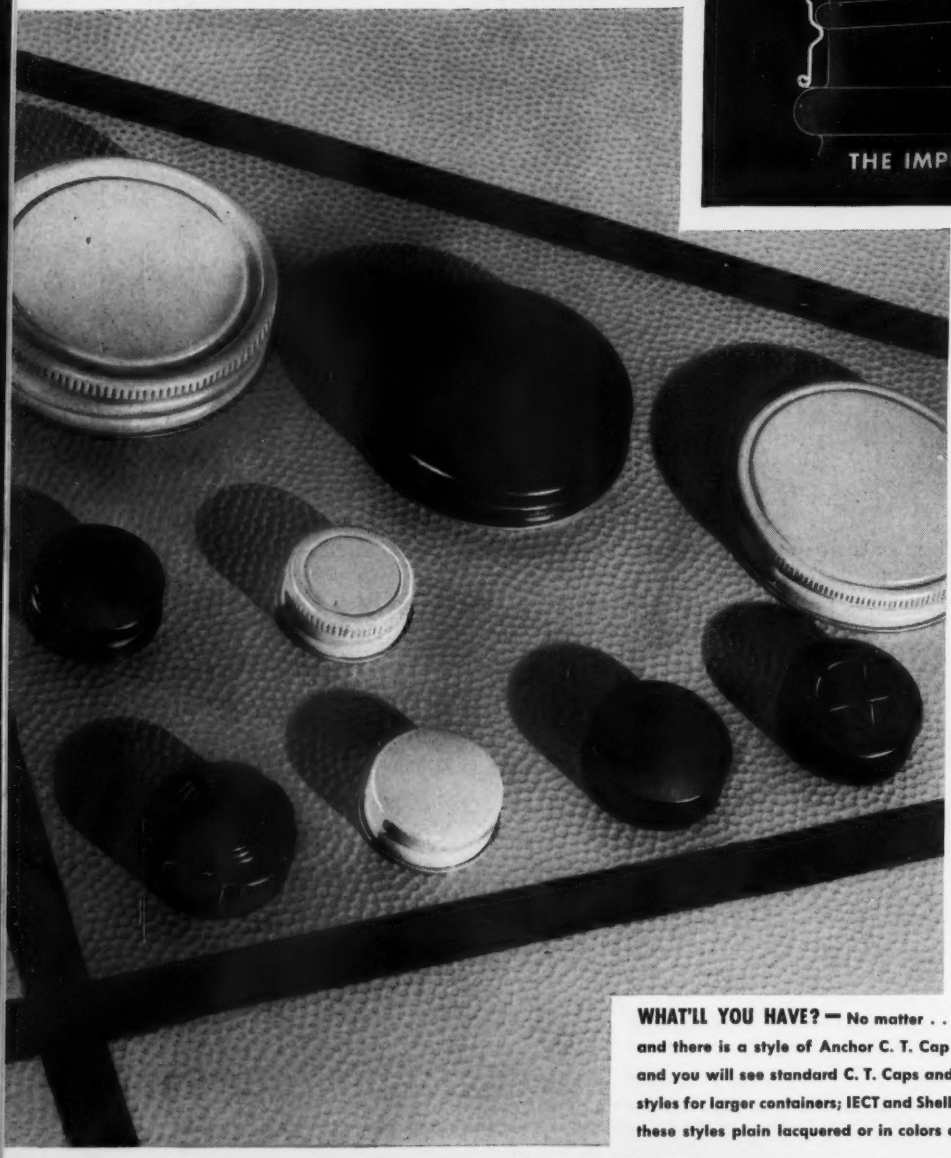
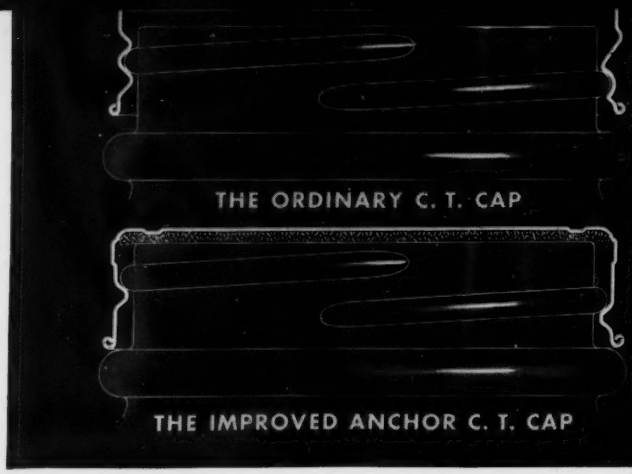
ENGINEERED

SEALING

Positive sealing results made possible by Anchor's Improved C. T. Cap construction





COMPARE—that you may actually see what we mean by "Engineered Sealing" we show both types—the usual one as well as Anchor's Improved C. T. Cap. Note how the Anchor thread makes contact all the way around the container but *only* on the underside of the glass thread. Thus it draws the cap down evenly and positively, bringing the liner into firm contact with the container top. There is no binding, no undue friction. Compare that with the ordinary thread which shows a binding action on the lefthand side, and no effective sealing contact on the opposite side.

Consider what all this means in results; in ease of application (the Anchor Cap spins on with little effort); in ease of removal (no freezing); and in dependable, efficient sealing without cocking or tilting. While these are the high spots, other new features of construction contribute to making the Anchor Improved C. T. Cap the best looking and most efficient on the market. May we explain them in detail?

WHAT'LL YOU HAVE?—No matter . . . just state what you like and what you need and there is a style of Anchor C. T. Cap to fill the bill. Refer to the illustration at left and you will see standard C. T. Caps and NKCT Caps for bottles and jars; Deep Screw styles for larger containers; IECT and Shellback Caps. Remember that you can get any of these styles plain lacquered or in colors as well as lithographed with private designs.

ORDEAL BY FIRE—Thoroughly clean tinplate is necessary for the perfect coverage of the protective lacquer. Here we see each separate sheet being fed into one of Anchor's cleaning machines—where it passes between jets of flame that burn off all grease and other foreign matter. Then through buffing rollers at the back so that it comes out bright and clean. Just another instance of Anchor care and thoroughness.

ANCHOR

CLOSURE DIVISION: ANCHOR CAP & CLOSURE CORPORATION, LONG ISLAND CITY, N. Y., and TORONTO, CAN.

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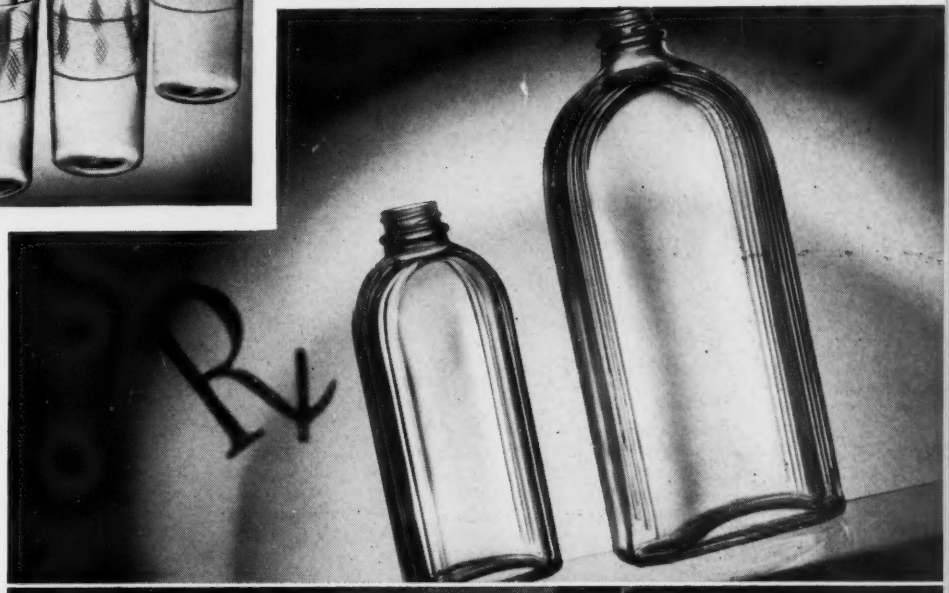

CUT GLASS APPEAL — Break down sales resistance, build up volume by offering this genuine, cut glass beverage set as a premium. The design is new, smart and appealing, hard for women to resist . . . besides, the low price at which we are offering these attractive 7-piece sets in quantity will astonish you. Let our premium specialists help you in your merchandising plans.

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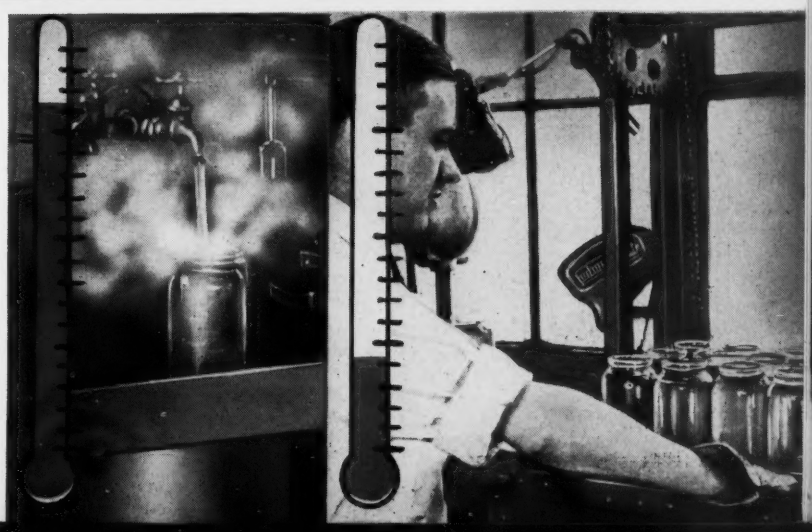

HOCKING

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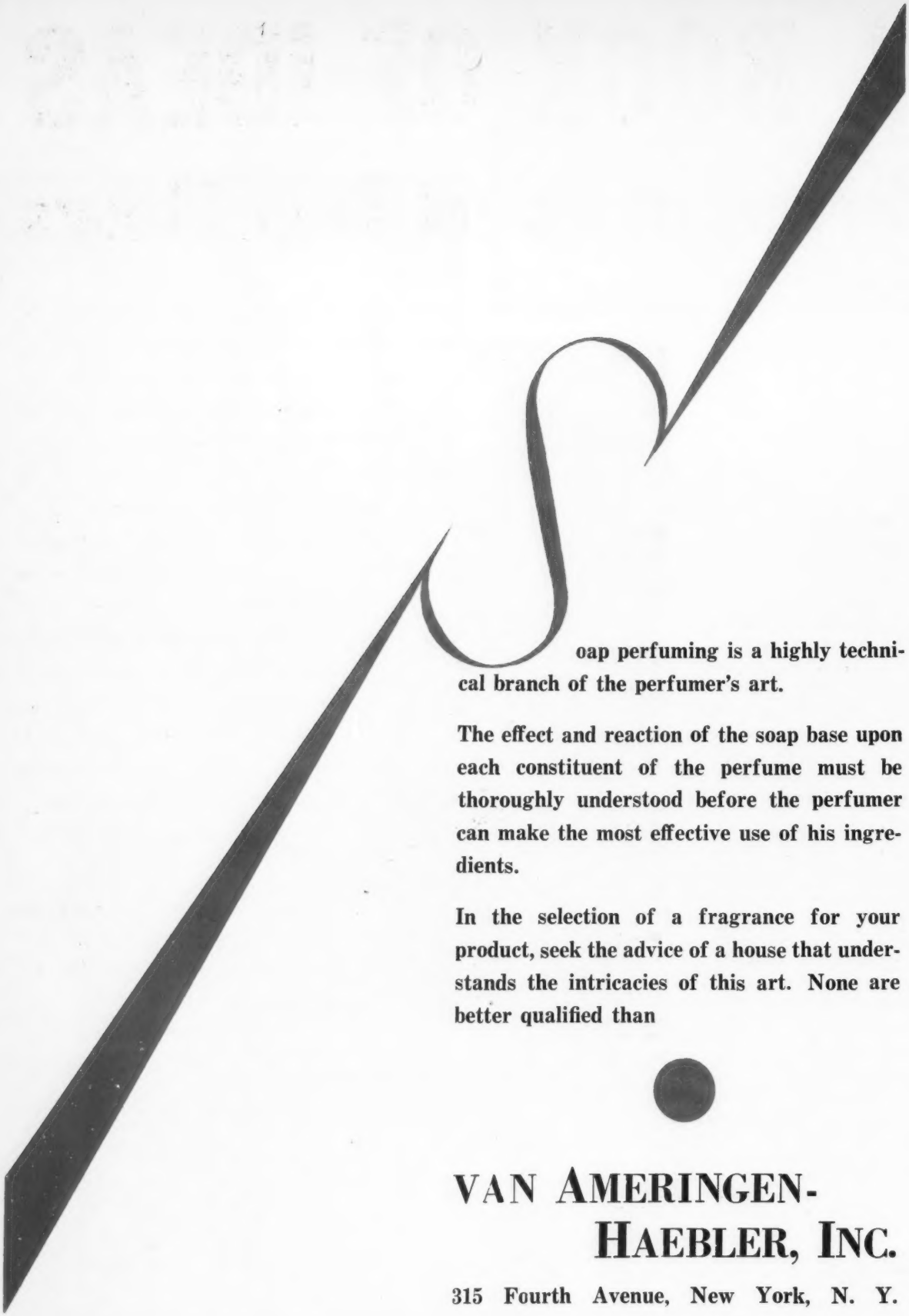

Soap perfuming is a highly technical branch of the perfumer's art.

The effect and reaction of the soap base upon each constituent of the perfume must be thoroughly understood before the perfumer can make the most effective use of his ingredients.

In the selection of a fragrance for your product, seek the advice of a house that understands the intricacies of this art. None are better qualified than

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Carbonate of Potash"

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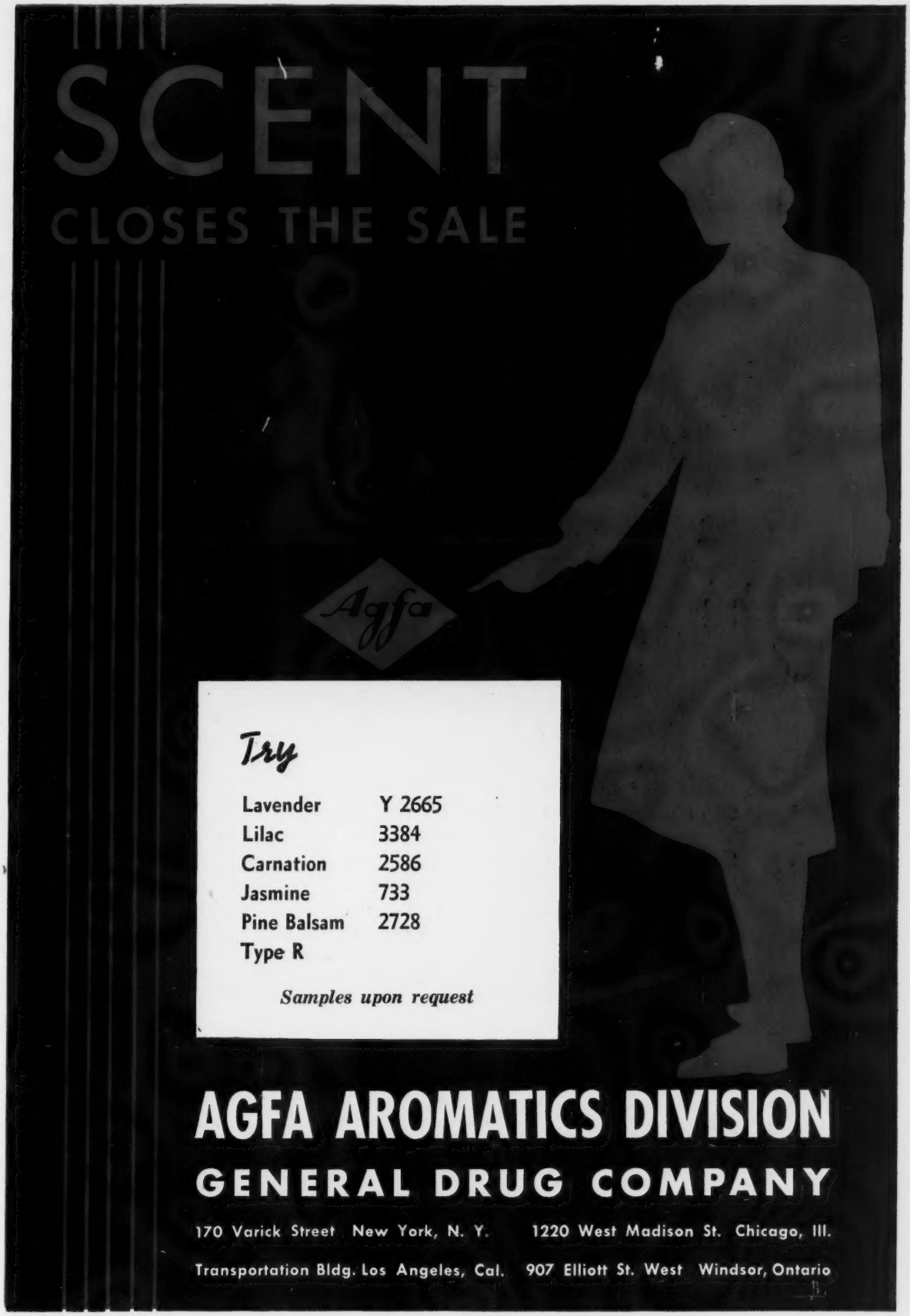
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BEAMAX should be flowed on in a thin, economical coat. It smooths itself.

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THE DAVIES-YOUNG SOAP COMPANY

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THE DAVIES-YOUNG SOAP CO.
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Name .....

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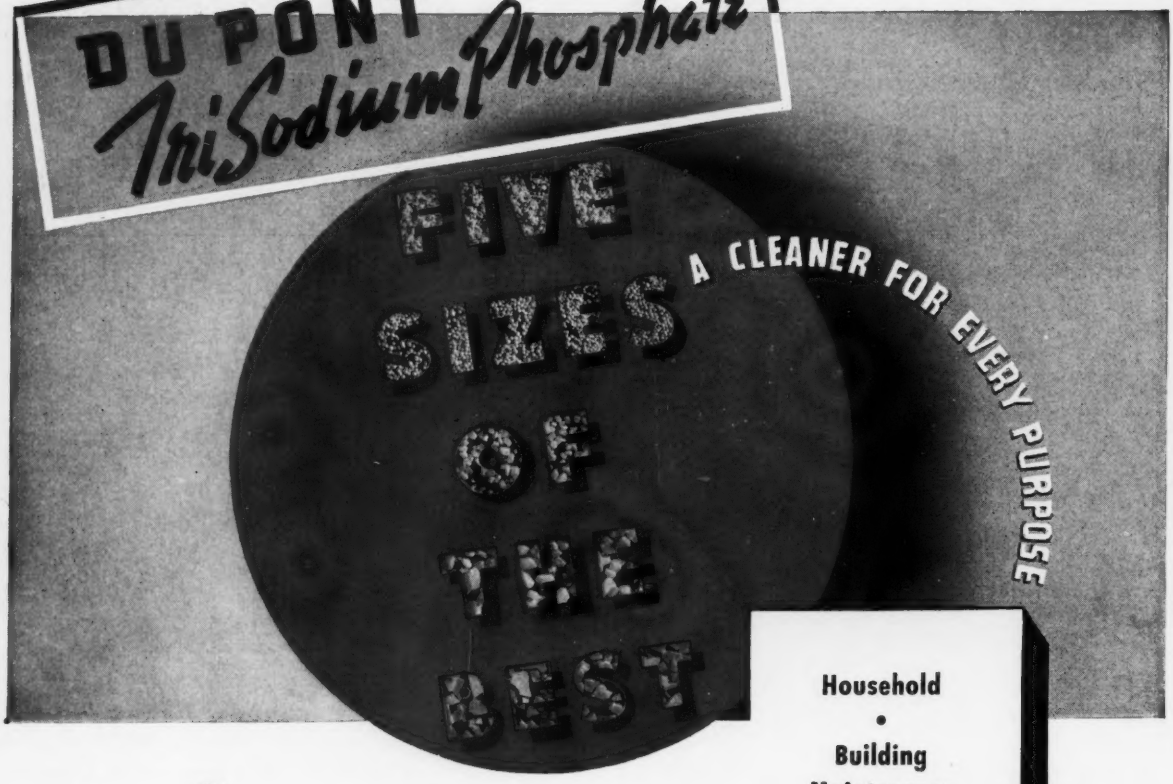

For soap and cleaning compounds DU PONT T. S. P. possesses outstanding characteristics. It is free flowing, readily soluble, odorless and germicidal in solution.

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FOR MEN ONLY

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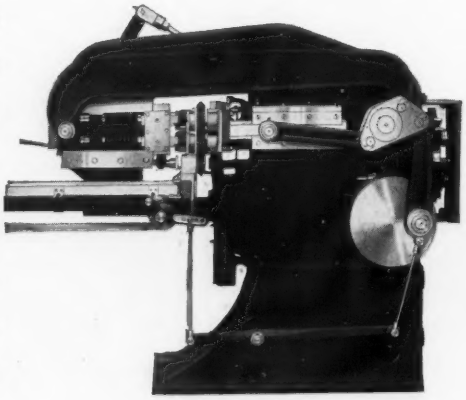
THIS EQUIPMENT **enables us to produce them at a price so reasonable that they return their cost to their users in a year's time.**

THIS EQUIPMENT **enables us to make them so efficient and dependable that they produce better looking and more salable soap than is possible by any other means.**



Type K Laundry Soap Press

R. A. JONES & CO., Inc.

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The Standardized *Constant Motion Cartoner* packages, bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds and inserts direction sheets and corrugated board liners with the loads.

As the Editor sees it..

FOR some months past, the U. S. Department of Labor has been studying wage and hour rates in the soap industry. The object, as most everyone in the industry knows, has been to set up a wage and hour scale which must be observed by all plants supplying government soap requirements under the Walsh-Healy Act. Now that the survey has been completed and the facts correlated, a public hearing will be held in Washington July 13.

The facts which the investigation brings out are on the whole very distinctly favorable to the soap industry. The most startling revelation is that over the past five years there has been an increase of fifty-seven per cent in the average hourly wage rate of soap workers. The survey shows labor in the soap industry to be generally well treated,—with the large companies paying even higher wage rates than the general average, and working shorter hours.

Lest the rank and file of the industry become too complacent, however, and consider attendance unnecessary at the scheduled Washington hearing, there are a number of features about the report and the hearing that should be emphasized. In the first place, the conference at Washington will be far more significant than a mere discussion of findings in connection with the Walsh-Healy Act. There are, of course, few soap contracts above the $10,000 mark and fewer concerns interested in bidding on them. The really significant feature of this report right at the moment is the fact that the Federal wage and hour bill has just become law. When government officials begin searching for prevailing minimums under the wage and hour law what would be more logical than for them to go direct to the data uncovered in the present survey?

For this reason particularly, it is important for the industry to see that fair conclusions are drawn at the public hearing. In previous cases, the attitude of the Department of Labor has generally been that the prevailing wage is the wage paid to the largest number of men,—and not necessarily by the largest number of companies. If the same reasoning is followed in the present case, the small soap maker is liable to see the adoption of a prevailing minimum wage well above his present scale.

For these reasons, every small soaper should be in Washington on July 12 and 13,—prepared to present facts about his wage and hour practices and problems, and ready to see that his interests are not ignored. Attendance at the public hearing,—and the general meeting of the industry which will precede it,—is most certainly indicated for every last manufacturer in the industry who can possibly make the trip.

WITH the passing of the five per cent Federal tax on sales of toilet soaps and allied soap products, the industry is well rid of one nuisance levy. The tax went off at the close of business on June 30, and all goods shipped after that time are not subject to the tax. The question was put as to exactly where the dividing line occurred between taxable and non-taxable sales. The answer is that where title to the goods passed after midnight of June 30, the soap is free of tax. Passing of title in ordinary trade practice is when the goods are delivered to the carrier. Where goods are delivered direct by the seller's truck, it is when the goods are unloaded at the buyer's plant.

The question has also been asked if shaving soaps, shaving creams, shampoos, and other soap specialties designed for toilet use, are now exempt from the tax as well as regular toilet soaps. Quite evidently, they are also now not taxable. The fact that they were classed as soap products

and taxed at the five per cent rate instead of the ten per cent rate for cosmetics and toilet articles, bears out this opinion. Soapless shampoos and other non-soap products, however, will apparently continue to carry the regular ten per cent cosmetic tax rate.

The end of the toilet soap sales tax brings a sigh of relief to many manufacturers who have been caused all sorts of trouble by various and sundry rulings of the Bureau of Internal Revenue under this law. This tax was a mistake from its very inception. The fact that it is now dead does not alter the fact that it never did have a logical place among the laws of the country.

THE Federal Trade Commission is going to work in earnest in the enforcement of the Wheeler-Lea Act covering statements and claims made in advertising. Thus far, manufacturers in the soap and allied fields, so far as we can determine appear to be conceding to the stipulations of the Commission in regard to revising the wording or tenor of their advertising. Several leading nationally advertised soap products have been included among those where changes in advertising have been agreed upon as reported in our preceding issue. That further revisions at the behest of the Commission will follow, is altogether likely.

Judging from the make-up of the law, a manufacturer who undertakes to fight back at the Federal Trade Commission is, in the parlance of baseball, going to bat with two strikes on him. Unless any stipulated change in advertising will seriously affect his business, the wise manufacturer appears to be he who accedes to the requirements of the Commission. To fight the case just for the sake of fighting, or for the so-called principle of the thing,—a grand old American custom,—might be a great giver of satisfaction, but it is liable to be expensive, and as things stand today, of little avail. Having one's head up where the rockets are flying is exciting, to be sure, but not exactly the sort of quiet spot we would pick for ourselves.

Among manufacturers, consolation may be found in the fact that all competitors are in the same boat. It would seem that the Commission is going to go right along the line and pare down advertising claims and statements until this heretofore beautifully flowering tree is a mere stump of its former self. And we doubt that in the long run it will make any serious difference to the legitimate manufacturer of good quality products, irrespective of what his advertising has been in the past. The effect on the completely deliberate crooks and fakers is bound to be much greater.

Viewing what has happened during the short period of the life of this law, it is just plain common sense to revamp advertising policies now where they are in need of revamping. Many firms have already completed steps to do just this, but there are still those who will wait until the storm breaks before they look around for shelter. To these latter, we suggest that they begin their own revamping now, and not wait until it is forced upon them.

SUCH reports of earnings and profits by soap companies for the first half of 1938 as may be issued in the near future, are not, we believe, going to be anything to write home about. Even though production for the first half-year did not show a decline in keeping with the general business situation, earnings were not what they had been for immediately previous periods, we are advised. This applies to a number of smaller companies as well as large ones. Keener competition, resulting in lower prices, and an unfavorable raw material situation were the main reasons given as the cause of smaller profits. The outlook for the second half of the year appears very considerably brighter than that which faced the industry last January.

THE oil and fat markets give signs of having scraped bottom after their long decline. The market for tallow, particularly, is reported to have been more active lately, with noticeable interest being shown on the part of bulk buyers in the soap industry.

Continuous Soap Making

By Paul D. Boone*

IN spite of various methods which have been put forward from time to time on continuous processes for soap manufacture, the great bulk of the world's soap tonnage is still made by the batch method with little change in general procedure from that used almost a century ago. This, however, does not mean that a few continuous processes are not in actual use today, or that they in time may not completely supplant present methods with all the inherent drawbacks of any batch process.

The literature in the technical fields with few exceptions, is devoted to the standard processes as actually employed, and little attention is paid to processes which have not been utilized industrially. This does not mean that other methods have not been devised and even that superior methods have not been worked out. The writer is firmly convinced that one of the most profitable studies that could be undertaken by some of the chemical process industries would be to thumb through the literature and re-investigate that which has been carried out before. Many processes and many products described in the publications and patents now yellowed with age might be found to have utilizable ideas. For in the past, particularly before this country became research minded, little attention was paid to the investigator or chemist who attempted to change materially established methods.

In presenting a picture on continuous processes for effecting the saponification of oils, fats or fatty acids to soaps, an attempt has been made to ferret out the modes suggested. And to an extent in a few instances, it is believed that the work went beyond the academic. No attempt has been made to treat size making or rosin neutralization. A continuous process has the advantage of saving in time and equipment and if not handicapped by other drawbacks may mean the saving of money.

The British patents offer a wealth of information and in topics pertaining to oils and fats, are not surpassed by the American. Because of age of the English system, no better start can be made than right there. One finds in 1854 record that Richard Tilghman[1] emulsified a fatty material by an aqueous alkaline carbonate solution and forced these ingredients into a coiled tube heated between the M.P. of tin and bismuth. The time was 10 minutes in this coil and the pressure 2,000 pounds or less. From there the soap formed was passed into another coil cooled by water to bring the temperature of the soap stream to below 212°F.

A year later, Rene le Mire of Normandy patented[2] his method. An aqueous solution of caustic was mixed with an oil or fat to form an emulsion and this was put in a reservoir. From there it trickled down by cocks or valves into a straight or coiled gun barrel or pipe (Perkins steam gun), and was shot or violently forced out into a reservoir by admitting steam into the barrel after the emulsion had flowed into it in proper quantity. One suggestion was to attach a still to the pipe, so that the volatile materials could be removed either by the heat of steam alone or with the assistance of fire under the still and condensed in a worm.

Robert Wright[3] two years later proposed an apparatus for a cyclic process employing two boilers, the first heated directly and the second by the first, whereby the contents were circulated continuously. In the true sense this process is only a circulating process operating in a continuous manner.

Burke patented[4] a process adaptable to both fatty acid production from fats and also to soap making. In the latter, the fat is passed through a coil to raise its temperature to 230° F. and goes to a mixing chamber where alkali at 42° Twaddell and super-heated steam are admitted. The material is then forced by steam from a chamber separate from this along a pipe for 30 feet and discharged into a soap pan where it is allowed to settle two hours. Seven pounds of alkali per hundredweight are used for hard soap and six for soft.

In 1882 Pielsticker patented[5] the idea of forcing by an injector an intimate mixture of fats or oils with the correct proportion of an alkaline solution through a coil pipe held at an elevated temperature,—or the alkaline solution was allowed to enter the injector separately.

Bower[6] took out British patent No. 13,549 of 1889 on the idea of forcing through two separate pipes the substances for making soap and bringing them together as opposing jets,—finely divided solid agents were used for intensifying such impact and attrition.

Paul Marix[7] worked out a process applicable "in the purification of oils and fats, in their saponification, in soap and stearin making."

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These were only some of the uses given. No specific example is given on soap formation but details are given on embodiments as to cleavage or hydrolysis. Water and fat at suitable temperatures are run into a centrifugal turbine, itself situated inside of the digester and consequently under pressure. In another mode, oil or fat and water under pressure at a high temperature are introduced simultaneously in the requisite proportion into the centrifugal. Under the action of the rotation, the water is retained at the periphery and imprisoned behind the layer of tallow at a pressure which prevents its vaporization. The emulsion is obtained at the exit in a continuous manner and at a high temperature. It is then discharged into a digester. The idea of a "common orifice" and "infinitesimal portions" is accented.

Again in Great Britain in 1902, Perrelet described in a patent[8] his mode of forcing preheated fat through one pipe and a base as hydrated lime, $Ca(OH)_2$, through another pipe, then jetting these fluids by means of nozzles whereby they encounter one another with great force. Saponification, he stated, takes place at once, and the products may pass from this chamber through a coiler pipe in a boiler from whence they are discharged.

An apparatus for carrying out chemical reactions in a continuous manner, without, however, specifying saponification by name, is described[9] in British No. 103,665. There is a of heated tubing in which the reaction is effected, means for forcing the reacting liquids through the coil, a recovering vessel and a hydraulic accumulator adapted to prevent variation of pressure within the coil.

Plauson[10] subjected oil, fats or fatty acids to a high speed mechanical disintegration in a colloid mill with the theoretical quantity of alkali, these materials being passed through the apparatus once or more. Then to finish the saponification, the emulsion is allowed to stand a day.

Lund's British patent[11] illustrates the making of a soap powder in one operation by blowing in a finely divided state into a container by air or by pressure resulting from heat,—oil, caustic solution and if desired sodium carbonate.

Nyrop's British Patent No. 237,325 discloses[12] passing a fatty oil, an emulsifying agent and an aqueous solution of alkali through a revolving member whereby an emulsifying and saponification action takes place, with the result that the usual boiling operation is rendered unnecessary. The space is filled with wire netting.

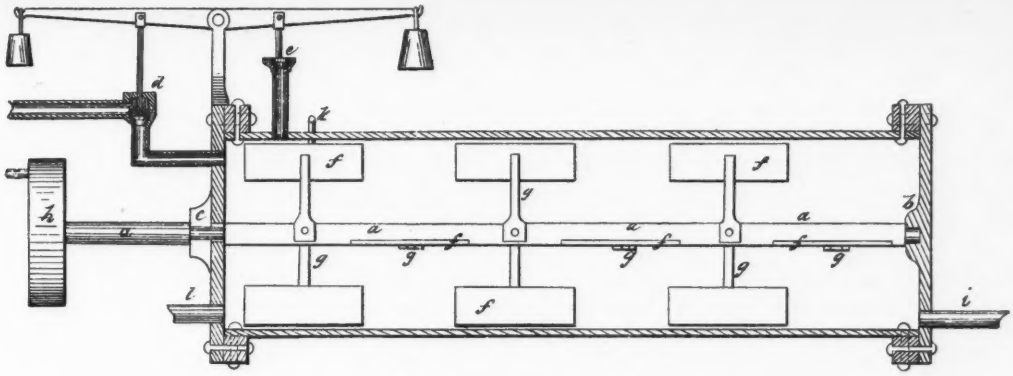
A British patent[13] to Nesfield issued in 1927 describes an initial step which is continuous in which a partial saponification is effected. A vegetable oil and lye solution of 38° Tw. both heated in separate vessels to slightly less than 100° C. are fed into a gravity emulsifier which in construction is a vessel containing a series of baffle plates having consecutively staggered and irregular shaped openings.

Graubner[14] in British No. 320,331 refers to a method doubtless that of Nyrop and to a second method of:—"passing fatty matter under pressure into an emulsifier having aperatured plates with holes in staggered relation where it meets the alkaline solution supplied separately thereto; the mixture is then passed over pipes heated with superheated steam." By his own method, the oil-alkaline solution mixture is conducted under pressure in comparatively thin streams in a zig-zag path in contact with a heated body formed by alternate arrangements of external ribs on the heating body and internal ribs on a surrounding member.

Some of the recent contributions in continuous saponification have been made by John B. E. Johnson[15]. In a British patent, No. 367,-513 of 1932, he sets out several embodiments the kernel of all of which is the pumping of a mixture of oil with an aqueous alkaline reagent through a coil, under conditions of a temperature not below 180° C. and a minimum pressure of 150 lbs. per sq. in. Sets of conditions as 800-2,000 lbs. pressure and a temperature of 250° C.-300° C. and a rate of 1½ pounds per minute are illustrated. The receiver is preferably constituted by a dephlegmating tower in which there is maintained normal atmospheric or a higher or alternately a low pressure, for example 10-20 mm. Glycerine is fractionally condensed. By this regulation, the soap discharged at the bottom is either substantially dry, or contains glycerine and is either with or without water. The melt of soap freed from volatile constituents may be rapidly removed from the hot distillation zone by its own weight or by employing conveying devices. A cooler can also be placed between the heated reaction pipe and the throttling valve through which the products pass and are thereby cooled to the desired extent before being discharged into the tower. In one embodiment, the oil and alkali are preheated in separate streams and mixed together just prior to their admission to the reaction coil which is held at 300° C. Soap powders from the process may be hydrated with steam.

In another example, the emulsion is pumped into a heating device consisting of a single pipe heating the products to 230° C. at 30 atmospheres pressure. This emulsion is then passed into a series of pipes with a diameter of 50 mm. and a length of 100 meters so that it is kept there 2 hours; it is then passed into a shorter and narrower pipe, heated slightly higher under the same pressure and leaves through a valve into another pipe going from there to a separator fitted with a syphon at the bottom; in the separator the soap is heated to 280°-300° C. The statement is made that even from red palm oil, white colored soap can be secured by this process. Johnson later took out a patent[16] on a method wherein a narrow tube of electrically conducting material is employed.

By the Thomas mode[17] given in British No. 458,782, fatty material and a saponifying reagent with or without a catalyst are fed under a succession of pressure impulses through separate heated conduits into a common mixing chamber from intersecting or opposed directions. By



Apparatus employed by Bennett and Gibbs: one of the oldest continuous methods of soap making.

reason of these impulses, the substances from the two conduits mutually bombard each other and are immediately afterwards forced by the feeding pressure through breaking up or emulsifying means to a cooling stage. The breaking up action is achieved by providing finely perforated partitions in said chamber. The impulses are about 2,000 per minute.

IN the United States, the earliest patent[18] for continuous saponification corresponds to the Tilghman British, then the next honor in point of time seems to belong to Bennett and Gibbs[19]. In a horizontal cylinder provided with a shaft for commingling, a supply of materials comes in at one end and the soap formed therein goes out the other through a line equipped with weighted valves. A pressure of 220-280 lbs. per sq. in. and a heat of 350°-400° F. are given as workable.

Hardy[20] took out a patent No. 64,099 in which he says a "continuous supply of soap may be produced." It seems that this is straining the words.

Hyde patented[21] a method in 1870 whereby oil heated at about 220° F. and lye also heated are drawn by separate pumps which discharge these fluids into a vertical jacketed cylinder which has obstruction plates therein and radial wings in each chamber. Stirrers are of various types performing distinct functions. Gravity feed can be used instead of pumps.

Gibbs[22] conceived of the idea of passing a mixture of fat and alkali by pump pressure through a heated channel filled with small particles of iron or other substances. A temperature of 350° F. is attained and the heat is used to warm the incoming material.

Riviere[23] thought up the idea of flowing equal volumes of fat heated to 80° C. from one vessel and lye at about the same temperature containing about 15 per cent NaOH from another vessel into a reaction vessel, the streams being regulated by valves. In this reactor which was in the form of a truncated cone inverted and provided at some centimeters distance from the small base with a perforated disk, gases or vapor for dividing the reacting liquids entered from below, passing in streams up through the liquids therein.

Gottschalk[24] made soap powder in a continuous procedure by passing the ingredients which react to give soap between heated rollers, the flow being by gravity.

Gesner's patented method[25] for continuously making soap consisted in using a mixing chamber where oil and an alkali solution were intimately mixed by beaters revolving in opposite directions. The liquids flow in to lower part of upwardly inclined steam jacketed cylinder in which a screw revolves.

According to Ellis[26], soda ash dry and soap stock are fed continuously into an apparatus such as at the top of a rotary, inclined heated chamber and the material passes down the same. A dry powder is secured.

By the Kayser[27] patent No. 1,153,625, heated red oil and sodium carbonate solution both at 125° C. are atomized to get thorough mixing within the spray tower or room.

In the U. S. in 1923, Bodman secured protection[28] on a two-step process, the initial step of which was continuous. In this step, a mixture of oil or fat and caustic at 160° F. is passed through an emulsifier into autoclaves. Up to this point, only 1/3 the amount of caustic necessary to neutralize the fatty acids forming the glycerides is added. Heat is applied in the autoclave treatment and a pressure of 20-110 lbs. is built up. The glycerine liquors are removed and caustic solution is then added in amounts sufficient to neutralize the free fatty acids and complete the saponification.

Spensley[29] worked out a continuous process using fatty acids with or without some oil employing a high speed mill operating at such speeds as 27,000 revolutions per minute, with a disc of 26-inch diameter. In an illustration, 4 parts of coconut oil and 6 parts stearic acid are melted together at 82° C.; 1.5 parts of NaOH are dissolved in 11 parts by weight of water. The NaOH solution is run into the mill simultaneously with the oil material and passed through the mill at once, then fed into the same

or another mill, whereupon the product is run into crutching frames. Soft soap is made this way also. In making dry soap powder, fatty acids are completely combined with soda. In an example 6 parts palm kernel fatty acids are stirred up with 7 parts water at 50° C. and this is poured in the mill while 21 parts of dry soda are fed in mechanically. Saponification action in the product may continue after it leaves the mill.

Using the Travis method[30], fats, oils or fatty acids or mixture of same and the alkaline solution are subjected to an intense disrupting and dispersing action which it is asserted increases the interfacial area and intimacy of contact to such an extent that saponification is practically instantaneous. The type of mill employed has a speed of 3,000 to 5,000 feet per minute and is constructed with a rotor having horizontal ridges; the clearance between the rotor and the stationary member is 0.002-0.01 in. Within the mill a temperature of 140°-200° F. is maintained.

By the Weber[31] patent, No. 1,904,021, fatty acids or an oil containing fatty acids are brought through one pipe and alkali carbonate solution through another. These unite in a mixer in the upper part of tower of great width. A partial saponification takes place here. This receptacle may have stationary or rotary sieves or propellers. Baffle walls direct this mixture into spreading devices within the tower proper, said devices being equipped with heating arrangements. The liquid is then run into a mixer in the middle section of the tower where caustic solution is added through a tube to saponify the neutral fat. The finished soap descends to the lower end of the tower where it is pumped off continuously. Vapors are drawn off through suction tubes at the top of the tower.

In manufacturing grease, Lauer [32] takes mineral and fatty oil ingredients and an alkali, heats in a coil to about 400-500° F. to convert the fat component to soap.

A patent to Beck[33] is worthy of note because although there is an initial autoclave saponification which goes far toward forming soap, there is a continuous pasage of a stream with elevation of temperature to a distillation zone. In an example 1000 parts of sperm oil are heated in an autoclave, while stirring, to 200° C. together with 590 parts of 20 per cent aqueous NaOH and 530 parts of water. After three hours, it is passed by the prevailing pressure into a pipe system in which it is heated to 300° C., then released through a second pipe connected therewith into a separator in which the temperature is kept at 300° C. A syphon at the bottom takes off molten soap while vapors are drawn off at an outlet pipe connected to the top of the separator and then led to a condenser. A stirrer can be employed in the separator and a somewhat higher temperature used there. Conveyor devices may be employed to remove the soap melt from the distillation zone.

Clayton and Burns[34], patent No. 2,019,775, set out mixing oil with an alkaline reagent in proper proportions to produce soap, exerting sufficient pressure to cause the mixture to flow through a restricted heated zone under pressure, cooling said soap after it leaves this zone and while still under pressure in the pipe system partially to solidify it. In an illustration, NaOH of 30° Be with a mixture of equal part of a coconut oil-tallow is used. The reagent which is supplied at a rate of about 45 per cent of the volume of the fat is jetted into the oil. The patentees state that this is not necessary as the liquids are thoroughly mixed due to the "mild turbulence" produced in the coil. The temperature set out is 400-500° F. and the pressure 150-500 lbs. per sq. in.

Clayton, Kerrick and Stadt[35], Reissue Patent No. 19,456, proposed to heat fat well above a temperature necessary to render it sufficiently fluid to pump readily. A NaOH solution of 37° Be is pumped into the pipe into the flowing oil in correct proportions. The soap solution is ejected from this zone of superatmospheric pressure into an expansion chamber, the steam escaping. Soap particles fall to the bottom.

Burns patent, No. 2,037,004, discloses[36] the employment of the temperature and pressure range of the patent to Clayton and Burns No. 2,019,775. The soap is cooled to a temperature of 240° F. after which it enters a nozzle within a tower. Air is introduced prior to or during the passage of the soap through the cooler and thereby entrained. When the soap is ejected from this, it expands produeing exceedingly spongy granules. These fall slowly through a shell and their external surface is dried by the hot dry air.

In Clayton[37] patent, No. 2,037,006, an alkaline solution and fat are passed continuously through a mixer and then into a heated coil. The soap formed is ejected then through a nozzle into a separating chamber held under vacuum. Glycerine and water vapors escape, passing upwardly. Soap is taken off continuously from the bottom of this vessel by a pump. It is almost water and glycerine free. Water in the form of steam is added then to this flowing stream of hot soap.

A patent on making a dry soap is that of Brown[38]. Here fatty acids are mixed with Na_2CO_3 in absence of any substantial amount of water and this mixture is then atomized by steam in an amount to effect reaction yielding soap.

Lorenz[39] has a continuous embodiment wherein oil and an alkaline solution are sprayed separately into a retort held under vacuum and heated at 250°-270°. Or the two liquids may be mixed and then sprayed. Air, nitrogen or hydrogen can be used in the spraying but steam is preferred. Glycerine is drawn off and condensed.

Katt's brief German patent[40] refers to the use of a centrifugal emulsifier to secure instantaneously the formation of soap. This is referred to in a Russian publication[45].

A French patent to Riviere[41] is similar to a U. S. patent. Oil held in one reservoir and caustic of 10-16° Be in another, both at 100° are flowed in ratio of 1 to 1 into the first element and the fluids spread upon a

(*Turn to Page* 71)

pH—Its Meaning and Use

Practical application and determination in soap and detergent practice . . . first of a series of three articles

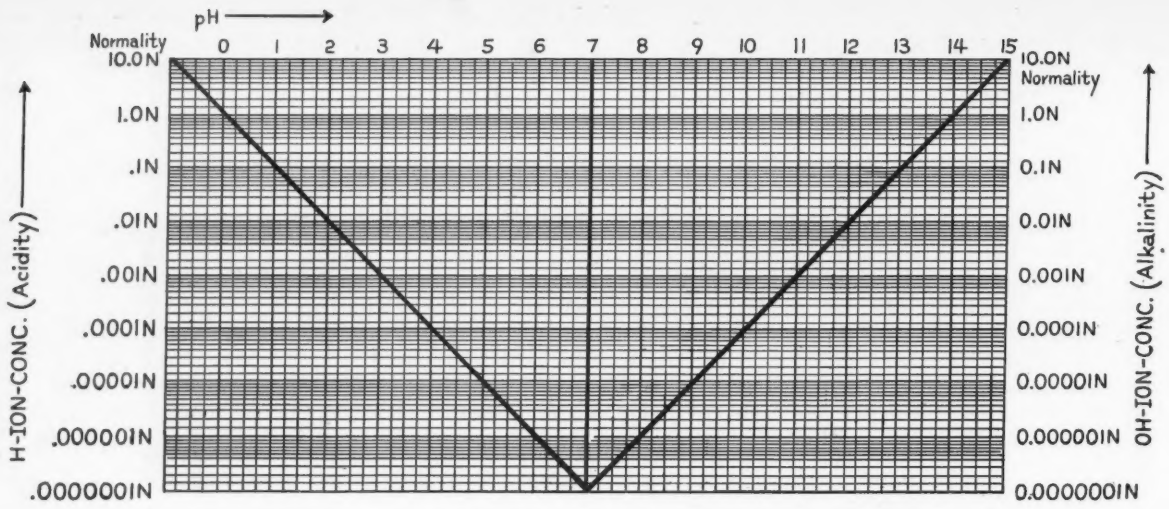
By Dr. C. A. Tyler

THE everyday usefulness of pH determinations has become apparent in nearly all fields of applied chemistry. The practical chemist has for years determined the total acidity or alkalinity of a solution by titrating to a neutral end-point. Many times it is much more important to know the degree of acidity or alkalinity of a solution, instead of its total acid or alkali content. While 0.1 Normal hydrochloric acid and 0.1 Normal acetic acid possess the same total acidity, as shown by titration, the former is a strong acid giving a *high* concentration of free hydrogen ions in solution, the latter a weak acid giving a *low* concentration of free hydrogen ions. Just as the chemist has for years tested the acidity or alkalinity of a solution by means of litmus paper, present methods enable him to determine the actual degree of such acidity or alkalinity.

The measurement of the concentration of free hydrogen ions or free hydroxyl ions is conveniently expressed in terms of pH. Although the theoretical development of the concept of pH is highly complex, it is not necessary to understand this in order to apply and benefit from the practical results. As we all know, the molecules of acids, bases, salts, and even water, dissociate to varying extents into oppositely charged ions. The dissociation of water ($H_2O \rightarrow H^+ + OH^-$) is very slight, and has been found to be about 1 molecule in 550 million. This is calculated from the dissociation constant of water, which is derived by applying the law of mass action. This states that dissociation is proportional to the ratio of the concentration of ions to molecules: $\frac{(H^+) \times (OH^-)}{(H_2O)} = k$, or $(H^+) \times (OH^-) = k_w$. In the equations, (H^+) represents the concentration of free hydrogen ions in mols per liter, (OH^-) the concentration of free hydroxyl ions in mols per liter, (H_2O) the mols per liter of undissociated water molecules and k a constant. Since the number of undissociated molecules is so great in comparison with the number dissociated, (H_2O) can be treated as a constant quantity, and we have the product of the concentrations of free hydrogen ions and free hydroxyl ions equal to dissociation constant for water, k_w. The value for this varies with temperature, but at 22° C. has been determined by a number of methods to be $1 \times \frac{1}{100,000,000,000,000}$. The denominator of this fraction is put in much simpler form by the use of an exponent, 10^{14}, which means that 10 is multiplied by itself 14 times, just as 2^2 equals 4, 2^3 equals 8, and 10^2 equals 100. We can therefore write the above number $\frac{1}{10^{14}}$. If we wish to avoid the use of a fraction we may write it 10^{-14}, which means the same thing. The negative exponent is the mathematical method of showing that the number belongs in the denominator of a fraction.

The mass-action equation shows us that hydrogen-ion concentration bears a definite relationship to hydroxyl-ion concentration, so that if we know one, we can always calculate the other. When an excess of hydrogen ions is present, there has to be a corresponding decrease in the concentration of hydroxyl ions, and vice versa. When the concentration of the two are equal, the solution is neutral. At neutrality our equation may be written: $\frac{1}{10,000,000} \times \frac{1}{10,000,000} = \frac{1}{100,000,000,000,000}$, or $10^{-7} \times 10^{-7} = 10^{-14}$. At the neutral point the concentration of hydrogen ions is 10^{-7}, but instead of writing it in this form, it has become customary to express the concentration of free hydrogen ions in terms of the negative exponent, of negative logarithm, or pH.

The pH of pure water is 7; if acid is added, the numerical value of pH becomes smaller, and if alkali is added, it becomes greater. Acidity increases from pH 7 to 0, alkalinity increases from pH 7 to 14. The sum of pH and pOH is 14, so that if the pH is 13, the pOH is 1. This merely illustrates that there is always a balance between hydrogen- and hydroxyl-ion concentration and even in very alkaline solutions, some free hydrogen ion is present. At pH 13 or pOH 1, the solution is strongly alkaline; the concentration of free hydroxyl



ions is pOH 1, or 10^{-1}, or $\frac{1}{10}$, or in decimals, 0.1 *N*. The relation of pH to the concentration of free hydrogen and free hydroxyl ions in terms of normality is shown on the accompanying graph[1].

The normalities shown on the graph cannot be correlated with specific acids or bases because when it comes to actual measurements, none of them behave in such a way as to give exactly the concentration of free hydrogen or hydroxyl ions which would correspond to their total acidity or alkalinity. Attraction of opposite charges, hydration of the ions, and other factors interfere. These effects vary with concentration and with temperature. The graph shows that at a pH of 2, the concentration of free or active hydrogen ions amounts to 0.01 *N*, and from the following table[2] it will be seen that this corresponds quite closely to the acidity of 0.01 *N* hydrochloric acid, which has a pH of 2.022.

Acid or Alkali	*pH*
N (Normal) HCl	0.10
0.1 *N* HCl	1.076
0.01 *N* HCl	2.022
0.001 *N* HCl	3.013
0.0001 *N* HCl	4.009
N NaOH at 18° C.	14.05
0.1 *N* NaOH at 18° C.	13.07
0.01 *N* NaOH at 18° C.	12.12
0.001 *N* NaOH at 18° C.	11.13
N acetic acid	2.366
0.1 *N* acetic acid	2.866
0.01 *N* acetic acid	3.366
0.001 *N* acetic acid	3.866

The highest acidity possible at ordinary temperatures is that of 6 *N* hydrochloric acid, which has a pH of —0.3. Referring again to the graph, this corresponds to an acidity beyond 0 pH, and therefore shows a change of sign. The highest alkalinity corresponds to that of 7 *N* potassium hydroxide, which has a pH of 14.5[3].

When thinking in terms of pH it is very important to remember that a difference of 1 pH unit in acidity or alkalinity may actually correspond to a vast difference in hydrogen- or hydroxyl-ion change, according to the position of the pH scale. E.g., in the region of neutrality differences of 1 unit in pH represent very slight changes in hydrogen- or hydroxyl-ion concentration. Going from pH 7 to 6, or 7 to 8, represents such a slight change in hydrogen ion concentration that the range between 6 and 8 is considered substantial neutrality. In a change from 7 to 8, the original figure for concentration is so small that when you multiply it by 10, you still have an exceedingly small value.

However, when a large number is multiplied by 10, the difference between the two is great. A pH change from 13 to 14 represents an enormous increase in alkalinity. The graph shows that this corresponds to a change of hydroxyl-ion concentration from 0.1 *N* to 1.0 *N*. This is practically the same as making a solution of 0.1 *N* sodium hydroxide 10 times stronger, which is indeed very different from making a 0.0000001 *N* solution of sodium hydroxide 10 times stronger. While the statement was made above, that the pH of pure water was 7, practically speaking this is not true. Distilled water, unless protected from contact with the air, absorbs enough carbon dioxide to give a faintly acid reaction, the average value being about pH 5.8.

BUFFERS: Not much can be done in hydrogen-ion work without an understanding of the meaning and use of buffers. These are substances which tend to maintain the same pH of a solution in spite of the addition of small amounts of acid or base. If a small amount of sodium hydroxide solution were added to 0.1 *N* hydrochloric acid, the reaction of the solution would immediately be changed. But if a little sodium hydroxide solution were added to a mixture of acetic acid and sodium acetate, the reaction would remain the same. This is because acetic acid is a weak acid and its dissociation is repressed by the presence of acetate ion from the sodium salt, which is highly dissociated. Mixtures of weak acids and their salts, or weak

[1] Robert Jaeger and Victor Coffman, *Am. Dyestuff Reporter* 16, 178 (1927).

[2] Leonor Michaelis and Wm. A. Perlzweig, "Hydrogen Ion Concentration," vol. I, p. 24. The Williams & Wilkins Co., Baltimore, Md. (1926).

[3] Julius Grant, "The Measurement of Hydrogen-ion Concentration," Longmans Green & Co., N. Y. (1930).

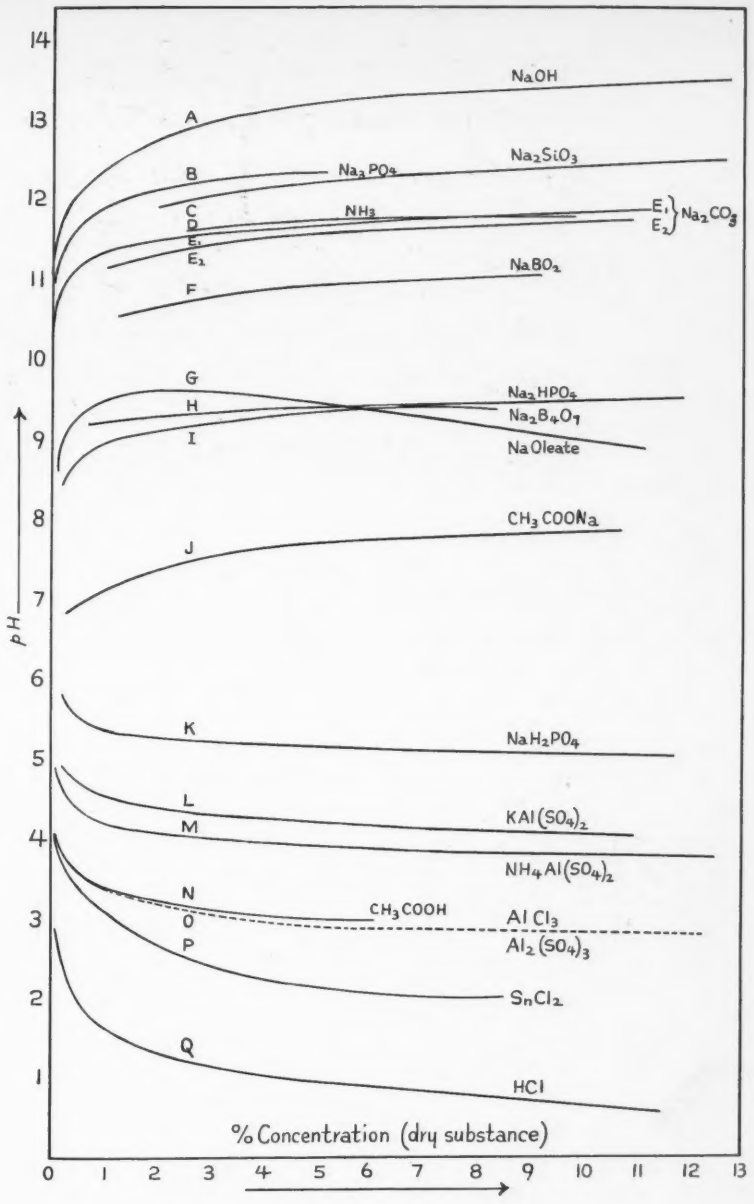
bases and their salts always have a buffer action. A series of buffer mixtures to cover the whole pH scale is known, and is of great value in pH work.

Alkaline salts, used extensively in the detergent field, are salts of a strong base and a weak acid. They hydrolyze to give an alkaline reaction. Alkaline salts have a buffering action against acid but not against alkali. This means that small amounts of acid such as might be encountered on soiled clothing in the laundry, will not appreciably affect the pH of a solution of alkaline salt. As stated above, substances which act as buffers against both acid and alkali have to be mixtures rather than a single compound. One component counteracts the effect of added acid, the other of added alkali.

The accompanying curves[4] show the reaction of various acid and alkali compounds, with the strong acid, hydrochloric, at the bottom, and the strong base, sodium hydroxide, at the top to give a means of comparison with the most familiar type of acid and alkali. While the curves are for concentrations up to about 10 per cent, practical interest usually centers around the lower portion of the curves corresponding to small concentrations. From the curves it may be observed that trisodium phosphate is more alkaline than sodium silicate, which is above sodium carbonate, which is above sodium metaborate. Borax, curve H, has a relatively low alkaline reaction.

Curve N for acetic acid, and curve J for sodium acetate show that when these two are mixed, the reaction of the buffer mixture will lie somewhere between the two curves in the mildly acid region, the exact reaction depending on the proportion of the two components. A mixture of disodium phosphate, curve I, and monosodium or monopotassium phosphate, curve K, makes an excellent buffer in the neutral range.

pH of Soap Solution: Only one curve for soap is given, and that is curve G for sodium oleate. This illustrates the type of curve that any soap will give. The general form



differs from that for the other alkaline and acid substances in that the pH rises to a maximum and then falls, with increase in concentration.

The pH of soap solutions depends on the extent of hydrolysis. This varies with the composition of the soap, with concentration, and with temperature. In dilute solutions at 90° C. all soaps are simple crystalloidal salts[5]. This means that as far as pH is concerned, at this concentration they behave much the same as other alkaline salts. This is shown on the graph, since the shape of the curve for sodium oleate resembles that of the curve for trisodium phosphate up to a concentration of 1 per cent or so. By dilute solutions, McBain refers to those containing less than 1/20 of an equivalent weight per kilogram of water. This corresponds to 1-1.5 per cent of soap, depending on the molecular weight of the fatty acid. The degree of hydrolysis of soaps at this concentration and 90° C. is proportional to molecular

(*Turn to Page* 72)

[4] Robert Jaeger and Victor Coffman, *Am. Dyestuff Reporter* 16, 181 (1927).

[5] James W. McBain and Kathleen Hay, *J. Chem. Soc.* 1929, 589-601.

TOILET SOAPS

From the dried chips to the finished soap cake . . . some practical notes and comments

By John Glenn
Birmingham, England

THE stages in toilet soap manufacture fall naturally into two groups: production of the soap base in the form of chips of the correct moisture content, and subsequent processess which result in the finished tablets. The toilet soap department, or the small manufacturer who works from chips, is naturally concerned only with the second stage. The following is a summary of the methods of procedure in these stages which experience has shown to lead to the most satisfactory results. Throughout, the attempt has been made to locate the source of faults which commonly arise in the finished soap,—too often after it has reached the hands of the retailer.

Certain manifestations, of course, such as rancidity (when not due to perfume) have their origin in earlier stages of manufacture. Unsuitable bases containing excessive proportions of salt, free alkali or unsaponified fat will give rise to many troubles, but for the purposes here, these defects will not be considered.

Storage: The first question is that of storage. Soap chips should always be kept in a fairly warm place if they have to be stored for any considerable time before use, either in airtight bins or hoppers, or in canvas bags. If they are chilled, their temperature during the milling process may not rise sufficiently to enable them to reach the plodder at the correct degree of heat, which should not be below 25° C. Furthermore, unless a considerable amount of water is added during the mixing process, the soap refuses to pass easily through the mill. This disadvantage often makes itself felt during winter months and results inevitably in overloaded motors or in slipping drive belts. Chips stored in bags during hot weather can advantageously be kept covered with slightly damped sacking to avoid undue drying.

Mixing: In this process, perfume, color, medicaments, or other additives are given a preliminary incorporation prior to milling. A tumbling box mixer is undoubtedly the most satisfactory type, although occasionally a stirring gear similar to an ordinary crutching pan is employed.

The mixer is most conveniently placed on a level above the

mill; so that its contents may be discharged directly into the mill hopper, or through an intermediate accumulating hopper if desired.

An inefficient mixer results usually in a one-sided tinting of the soap chips which usually persists during milling. The final effect is to produce a streaky plodder bar, with consequent disfiguration of the finished tablets.

Perfume: The addition of perfume to toilet soap is the introduction of a potential source of possibly serious discoloration. With many perfumes, the discoloration is recognized to be unavoidable,—carnation soaps for instance, are particularly prone to darkening. The only remedy, which for reasons of packaging or display many manufacturers are loth to adopt, is to tint the soap in such a way as at least to minimize the appearance of discoloration.

Apart from this question, an outbreak of otherwise inexplicable spotting develops in toilet soap on storage can often be traced to carelessness in the perfumes selected. Perfumes containing large proportions of crystalline synthetics such as heliotropin, artificial musks, etc., especially if the rest of the perfume complex does not happen to be a very good solvent for these bodies, may tend to throw down minute crystals in cold weather. These undissolved particles, finding their way into the finished soap, will almost certainly give rise eventually to local discoloration in the form of ugly spots and blotches.

Added Materials: Normally toilet soaps do not contain inert fillers as mere adulterants, but it is the usual custom to incorporate small percentages of zinc or titanium oxides to act as whitening and opacifying agents.

Only the finest grades free from all traces of grittiness should be used, and used dry in order to avoid a tendency to lumpiness with its inevitable result of uneven dispersion. As titanium dioxide has at least four times the covering power of zinc oxide, the smaller quantities employed must be given very thorough mixing. The streakiness produced by inadequate dispersion is more apparent in highly tinted toilet soaps, especially in blue and violet.

If lanolin is used as a superfatting agent to impart the desirable velvety smoothness to the soap lather, it is preferably melted and mixed with the perfume. An alternative method is to melt it with its own volume of water, add a little liquid soap or soap solution, and stir vigorously to form a fine white emulsion which is added while hot to the mixing box. If the lanolin is merely melted and poured onto the soap chips it congeals immediately and never becomes thoroughly admixed, making its appearance in the soap tablets finally produced as tiny spots something like freckles. These do not, however, act as centres of discoloration, but may be very disfiguring in a dead white soap.

Medicaments: The many substances added to toilet soaps in order to justify the title "medicated," although of doubtful utility from a dermatological standpoint, are always potential sources of discoloration, often indirectly. Soap containing free sulfur for instance, which in the usual form of "flowers of sulfur" always contains soluble sulfur compounds and traces of H_2S, can react with the copper of the dies used in stamping, to produce, especially if the dies are not thoroughly cleaned between batches, an unpleasant surface discoloration. As a general rule, medicaments should be added in solution where possible to secure even distribution; otherwise in a fine state of division.

Moisture Adjustment: It is a matter of experience that soap chips leaving the dryer with the correct amount of moisture for satisfactory working give better results than chips which require addition of water at the mixing stage. A greater tendency to cracking is observed in the second case, owing probably to a lower degree of homogeneity in the texture of the soap. It is therefore to the advantage of the toilet soap manufacturer to take the necessary steps to ensure correct drying.

The optimum moisture content varies from base to base. A base made from bleached palm oil and coconut can often be worked satisfactorily at 20-23 per cent moisture. From a storage point of view, however, such a figure is undesirable as the soap is liable to severe shrinkage and loss of weight. The shrinkage, incidentally, is more pronounced across the run of the plodder bar, so that a round tablet will eventually become noticeably oval.

A general figure for moisture content is about 17 per cent, although for quality soap expected to possess a high gloss and even texture it is advisable not to exceed 15 per cent. With the average soap base, a lower figure results in greatly increased difficulty in milling and plodding, and a marked tendency to form a scaly surface as the soap leaves the plodder. At 17 per cent moisture content, the soap is sufficiently plastic to pass easily through the die without scaling, but remains resistant enough to maintain a high degree of compression, thus minimizing the risk of subsequent cracking.

Color: Occasionally one still meets pigments intended for use in soap. In the author's opinion, these are quite unnecessary, as fast, alkali stable, soluble dyestuffs are now to be obtained to give every possible shade. Pigments are difficult to incorporate, are uneconomical owing to the large proportion required and are messy and inconvenient in use.

It is usually possible to make up stock solutions of suitable colors, using the minimum amount of water required to keep the dye in solution. A reference table can then be prepared giving the number of fluid ounces of solution required per hundred weight of soap.

In making up dyestuff solutions, two points must be noted. First, the solutions must not be boiled, owing to the possibility of decomposition. Second, every particle of dyestuff must be dissolved, or it will appear in the finished soap tablet and offer an unwanted demonstration of diffusion in the solid state by spreading slowly as a deeply

colored spot. Colors should be dissolved by mixing into a paste with cold water, adding the rest of the water just below boiling point. If this is done, only a very few colors will need filtration before use. Should this be needed, several thicknesses of muslin are usually adequate, — for filter paper is unnecessarily slow.

One or two colors, — some yellows and browns for instance,— are readily soluble in warm water but crystallize out on cooling. These crystals are usually highly hydrated, and are very soft. If the solution containers are well agitated before use to secure homogeneity, it will be found that the colors will mix smoothly into the soap without streaking or spotting.

Milling: Although it is almost a tradition with many manufacturers that toilet soap should be triple milled, the efficiency of the modern mill usually makes a third milling unnecessary, providing always that the preliminary mixing has been sufficiently thorough, and that the chips did not require the addition of extra water.

If added moisture is necessary, triple milling becomes advisable to secure homogeneity and a decreased risk of cracking. It is also occasionally essential when a deeply colored soap (such as violet) is being produced from a dyestuff of high tinctorial power, to avoid streaking.

The modern mill, faster and more powerful than its granite-rolled predecessor, is able to run with a much closer roll setting without decreased output, so that its kneading action is more thorough and satisfactory homogenization is accomplished usually after two millings. A further advantage, the use of water cooled rolls, enables a suitable adjustment to be made to the final temperature of the ribbons leaving the mill. The ribbon crimping device, sometimes fitted, is claimed to give better results in the plodder; but the actual improvement is doubtful. Definitely, however, the crimping allows the ribbons to pack down into the trucks or accumulating hoppers, taking up less room and retaining their warmth if it should be necessary to delay plodding for any reason.

As a general rule, thin ribbons yield a soap less liable to splitting than thick, but against this must be set the greatly increased difficulty in milling and the lowered output.

Plodding: The optimum temperature of ribbons fed to the plodder is about 25° C. Below this temperature the ribbons will not cohere satisfactorily and offer undue resistance to the screw. The plodder nozzle is heated by gas or electrically to a temperature at which it can just be borne by the hand. If the moisture content is correct, and the ribbons in the plodder hopper are kept well pressed down onto the screw, the issuing bar should be smooth, glossy and evenly textured, capable of being bent almost double without breaking.

If the bar breaks with a "short" fracture it usually implies chilled ribbons, and the issuing bars should be thrown back until the plodder warms up. A scaly appearance on the surface of the bar may indicate three faults:—(1) that the ribbons are too dry; (2) that compression is not being maintained, or (3) that the nozzle is too cold. If the nozzle temperature is too high, blistering will occur. Soap with a high content of moisture or perfume is always more prone to blistering, and it may even be found occasionally that blisters appear below the temperature which produces maximum gloss.

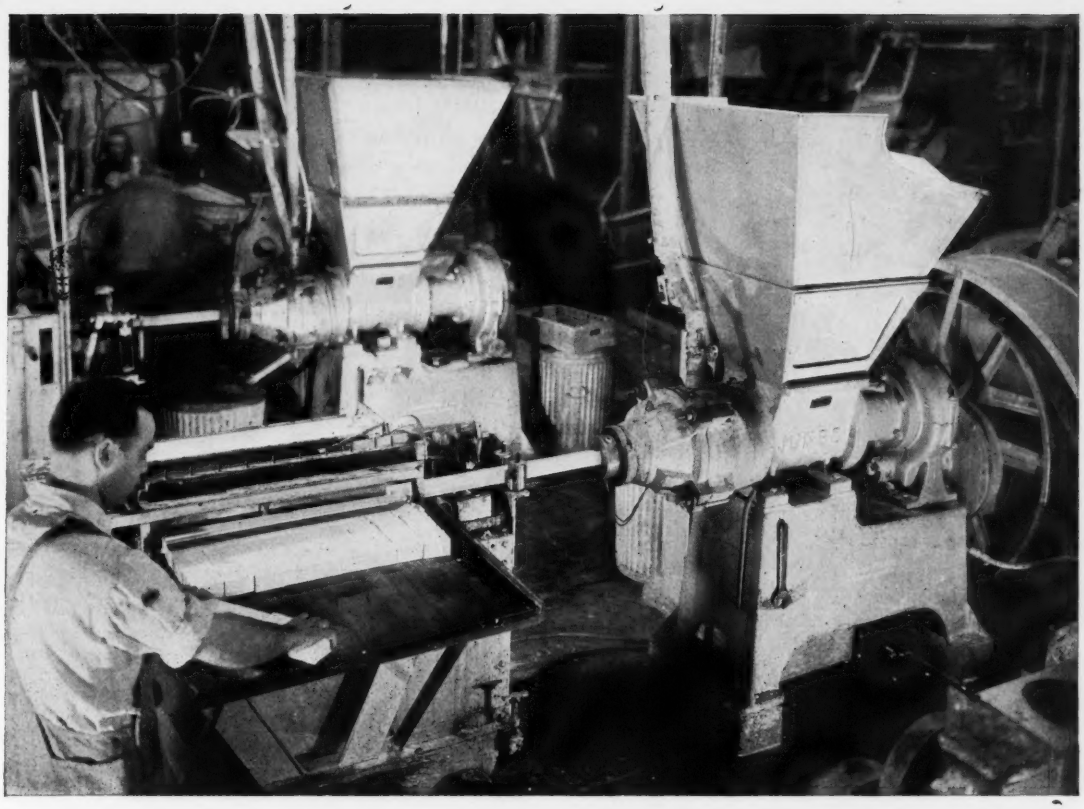
The barrel of the plodder is usually supplied with a cooling jacket. As soon as the barrel has lost its chill, the water should be turned on. Otherwise the soap begins to get warm before leaving the screw and often sticks to its surface, reducing the movement of soap through the plodder and sometimes clogging it entirely.

Scrupulous attention must be paid to plodder cleaning. The appearance of brown streaks in soap on storage can usually be attributed to minute particles of rust allowed to form on the interior of the compression chamber, and for this reason cleaning should never be delayed overnight. Even if the same type of soap is being plodded on the following day, all particles of soap must be removed. Otherwise, apart from the question of discoloration, these small pieces of adherent soap will be carried out into the plodder bar formed from fresh ribbons. The disadvantage of this becomes apparent during use of the tablet; for the dried, hard soap retains its texture in the softer matrix in which it is embedded, so that it presently appears as a distinct lumpiness as the tablet itself dissolves away more rapidly.

Cutting and Pressing: If the plodder is not fitted with an automatic cutter to produce billets of the required size from the bar as it extrudes, lengths of about eighteen inches are usually cut by hand with an adjustable wire frame. These should be cut as soon as possible, before the soap begins to harden, into the required billets.

It is essential that the billets should be a shape that will allow stamping with the minimum "spread," and therefore for any mould or particular weight of tablet the plodder die and the cutting frame adjustment must be carefully correllated to give a billet as nearly as possible of the dimensions of the finished tablet. This, of course, is quite easy for oblong tablets, but impossible for round. It is, of course, possible to stamp billets from a circular plodder die across the grain of the soap; but this procedure inevitably tends to weaken the coherency of the tablets, and in any case does not produce so glossy a surface. In cutting billets for capacity moulds, a fair margin of safety should be allowed; so that the excess soap may act as a cushion to prevent injury to the die edges.

Tablets are always more satisfactory if they can be stamped while the billets are still warm and plastic. In fact if the soap is allowed to stand overnight in a chilled atmosphere, they may crack as soon as removed from the moulds. Unfortunately, the warm soap usually sticks badly to the brass surface, and some sort of lubricant is necessary. A strong brine in which of course soap is insoluble, is the agent most usually employed. Its



big disadvantages are two: that unless it is used very sparingly salt crystals may form an unsightly efflorescence on the surface of the tablet; and that it has a strongly corrosive action on the metal parts of the soap press.

A 20 per cent glycerine solution is sometimes recommended. It is not as satisfactory as salt solution, its expensive nature rather overweighing its advantage of being free from crystallizable solids. Thin mineral oil containing a little lanolin can be used successfully, but only when the dies are freshly cleaned and free from soap, as otherwise a suitably thin film cannot be obtained. If salt is used, care must be taken to keep bedplates, etc. clean, or rust particles may find their way into the soap on pressing and cause local discoloration.

Soap dies are preferably cleaned with fine pumice powder and a damp cloth, followed by washing in warm soapy water to remove the pumice from the angles of lettering; finally rinsing in cold water. A thin film of petroleum jelly should be applied before returning to racks. Ordinary metal polish is not suitable for soap moulds, as it can only be removed with difficulty from incised lettering, and may produce black smears on the soap.

"Bars from the plodder should be smooth, glossy and evenly textured, capable of being bent almost double without breaking."

Storage and Wrapping: Toilet soap, especially soap which is to be wrapped, should always be allowed to "mature" for at least a fortnight exposed to the air in a dark, dust-free place. It then develops, through surface drying, a comparatively tough outer skin which will resist handling and be less liable to interaction with wrapping materials. Hand trimming for high class soaps should take place after this skin has formed, to avoid thumbprints and denting. A rich polish can be imparted if desired with a soft cloth dampened with methylated spirit.

All packing or wrapping materials which come into direct contact with the soap should be thoroughly tested before use for discoloration effects. Boxes containing naked tablets are liable to develop ugly brown blotches at the points of contact between the soap and cardboard, and occasionally it will be found that the board contains water-soluble coloring matter which diffuses into the soap itself. This last effect is more likely to occur if the soap is packed without previous drying. Especial care must be taken in selecting the inner wrapper of wrapped tablets. Not only must it be effective in preventing discoloration of the outer wrapping (which is usually of a material chosen for its appearance rather than for its resistance to alkali), but it must be absolutely free from any tendency to turn brown in contact with soap. The parchment paper so frequently employed, whilst protecting the outer wrapper satisfactorily, is very prone to discoloration on its own account. Waxed tissue is probably the most generally acceptable medium, although it cannot be printed with the

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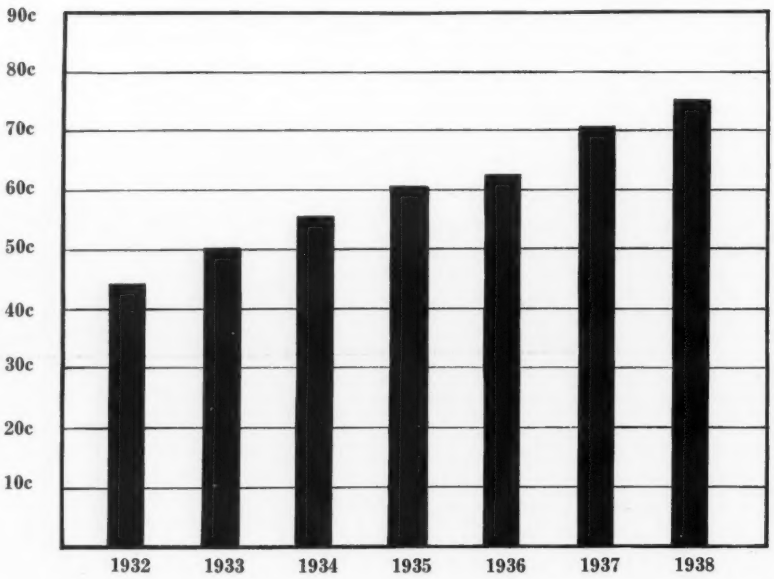
Soap Wages Up 57 Per Cent Since 1932

Sharp increase in wage rate accompanied by 14 per cent drop in work hours . . . Total earnings of workers up 35 per cent . . . Results survey by Bureau of Labor Statistics

WAGE rates of the American soap industry have increased approximately 57 per cent since 1932. Hourly rates today stand at close to seventy cents as compared to a figure around forty-four cents five years ago. During this period, the work week of the soap industry has been reduced from an average of 44.6 hours to a current figure of slightly under 39 hours. Average weekly earnings are now above $27 per week as compared with a depression low of around $20. These are the figures just released in a report of a survey of the soap industry made by the U. S. Bureau of Labor Statistics.

The Bureau has just completed the report on earnings and hours in the soap industry which it set out to compile early this year, and has called a public hearing on the findings in Washington for July 13th. A general meeting of the soap industry will be held in Washington the day before the government hearing, on call of Roscoe C. Edlund of the Association of American Soap & Glycerine Producers.

The study of wages and hours was undertaken by the U. S. Bureau of Labor Statistics to provide data from which a prevailing schedule of minimum wages can be calculated for the purposes of the Walsh-Healy Public Contract Act. Under this act it is provided that no firm selling goods to the government can be granted a public contract in excess of $10,000 unless it operates under a maximum hour and minimum wage set-up in conformity with the prevailing maximums and minimums of the industry.



Wage rates paid workers in the soap industry in cents per hour from 1932 through March, 1938. Based on figures gathered monthly by the Division of Employment Statistics of the U. S. Dept. of Labor. Higher rates of pay than those disclosed in the recent survey are shown in this chart as concerns reporting monthly figures to the labor department are predominantly in the large and higher-paying classification.

The soap industry, as defined by the U. S. Bureau of the Census and as considered in the present survey, "consists in the manufacture, as a primary product, of soap in bars and cakes and in granulated, powdered, and liquid form, and of cleansers, scouring powders, and washing compounds containing soap made in the same factories."

In making its study, the Bureau of Labor Statistics based its findings on a sample including 7,143 wage earners employed by 72 soap companies. The companies studied were selected to give consideration to different sizes of firms represented in the industry, varying geographical locations and other factors, it is stated. A number of broad findings of considerable interest are reported. The cost of labor in the soap industry, for instance, represents but a small share in the price of soap. On the basis of the 1935 census figures, the total wages paid amounted to only slightly over six per cent of the total value, of the product.

Attention is called to two employment peaks in the soap in-

dustry, — the first in the spring months, and the second seasonal peak in October or November.

The survey indicates very clearly that average earnings for employees of the large companies in the industry are considerably higher than that for other establishments. In the large companies the average hourly pay is 76.2c, as compared with 58.0c in the medium-sized group and 55.6c in the small companies.

The general method of payment in the soap industry is on a straight time basis. Of the 72 establishments studied, 49 paid their employees exclusively on this basis. In 7 plants some workers were paid on a straight time and others on a straight piece work basis. In 15 plants some employees were paid straight time rates, while others worked under some production bonus plan. Only one plant employed all three methods of wage payment. Most of the production bonus workers were found in the larger establishments.

All of the large companies paid wage-earners time and one-half for all work beyond regular scheduled time, which is usually 8 hours per day and 40 hours per week. Some also allowed still higher rates for Sundays and holidays. Of sixteen medium-sized companies, eight paid at the regular rate, six at time and one-half and one at time and one-fourth for overtime, the other concern providing no compensation for overtime. In only one plant of this group was any special provision made for Sunday and holiday work, the rate in this case being double the regular wage. Only seven of the forty-three small companies paid wage earners time and one-half, while six provided no compensation for overtime work. The majority paid straight time for work beyond scheduled hours.

The study revealed a fairly wide spread of wage rates among soap workers of different capacities. The range is from 32.5c to $1.125, with most of the workers concentrated in three separate wage rate groups in the general neighborhood of 40c, 50c and 75c per hour. Of the total number of workers employed, 85.2 per cent were found to be men. Unskilled men earned on the average 63.8c an hour. Semi-skilled male workers averaged 71.8c an hour, while skilled male workers averaged 90.3c an hour. Unskilled females averaged 46.7c an hour, while semi-skilled females averaged 50.4c an hour. This small differential of only 3.7c between semi-skilled and unskilled females received special note in the report.

A study of occupational differentials disclosed that soap makers are the best paid employees in the industry. They average approximately one dollar an hour. Next in line are machinists, 97c, electricians, 96c, and machine set-up men, 94.3c Working foremen, averaging 86.6c an hour, constituted the largest single occupation in the skilled male group.

Only 5 out of the 23 semi-skilled male occupations for which figures are presented averaged under 70 cents an hour. Among these five occupations, hand-or foot-press operators earned 52.7 cents, the lowest average, while drier, grinding, filling machine, and mill and plodder operators averaged from 62.1 to 67.4 cents. The averages of the remaining occupations ranged from 70.4 to 80.3 cents. Pumpers, averaging 74.6 cents, constituted the most numerous individual occupation. Tower operators, a relatively new occupation, earned 79.7 cents on the average, while tractor operators received the highest average (80.3 cents) in the group of semi-skilled male occupations.

The lowest average for unskilled male employees was received by conveyor line workers, including catchers, feeders, and rackers, who averaged 44.3 cents an hour. It will be observed, however, that there are very few males in this occupation. With the exception of the miscellaneous unskilled employees, the remaining occupations ranged from 60.6 cents for bulk packers to 70.0 cents for clean-up men and janitors. Hand truckers, earning 68.6 cents, were the largest group of unskilled men, except for the general laborers whose duties in many instances overlap those of other more clearly defined occupations. The general laborers averaged 63.3 cents an hour.

The average hourly earnings of semi-skilled females ranged from 45.0 cents for machine-press operators to 53.7 cents for inspectors. All of the unskilled females, with the exception of 32 employees in the miscellaneous group, were found in the light-task occupations of conveyor-line workers (including catchers, feeders, and rackers), hand wrappers, and shipping packers. The hourly earnings of unskilled females ranged from 42.2 cents for the miscellaneous group to 48.9 cents for shipping packers.

The forty-hour week was found to be almost universal among the large and middle-sized companies. The exceptions were two companies in the first group that had full time work weeks of 35 hours and two in the middle-sized group that worked 42½ and 48 hours. Among the small companies, two worked less than 40 hours, twenty-three worked exactly 40 hours, four worked 40 to 44 hours, ten worked exactly 44 hours, and the remaining four varied from 45 to 52½ hours. Most of the plants that had full-time hours in excess of 40 per week were among those with the lowest average hourly earnings.

The average weekly hours actually worked by all employees in the soap industry amounted to 39.4 in January, 1938. The male employees averaged over 2 hours more than the females per week,—the actual figures being 39.7 hours for men and 37.6 hours for women.

The average earnings of all employees amounted to $27.08 per week in January, 1938. Among the male employees, skilled workers averaged $36.64, semi-skilled averaged $28.51 and unskilled averaged $25.00. The weekly earnings of female employees were $19.33 for semi-skilled and $17.42 for unskilled.

New Products

The new soap flake package for Procter & Gamble's "Chipso" is said to carry more sales punch than the package it replaces,—which stressed beauty of design, simplicity and legibility. Prime purpose of package, they believe, is to sell soap,—not be beautiful.

New additions to the line of Geo. H. Nowland Co., Cincinnati, are shaving cup soap, a 5 cent seller, and shaving cream in 10 and 25 cent sizes. Distributed thru nation-wide chain stores.

◆

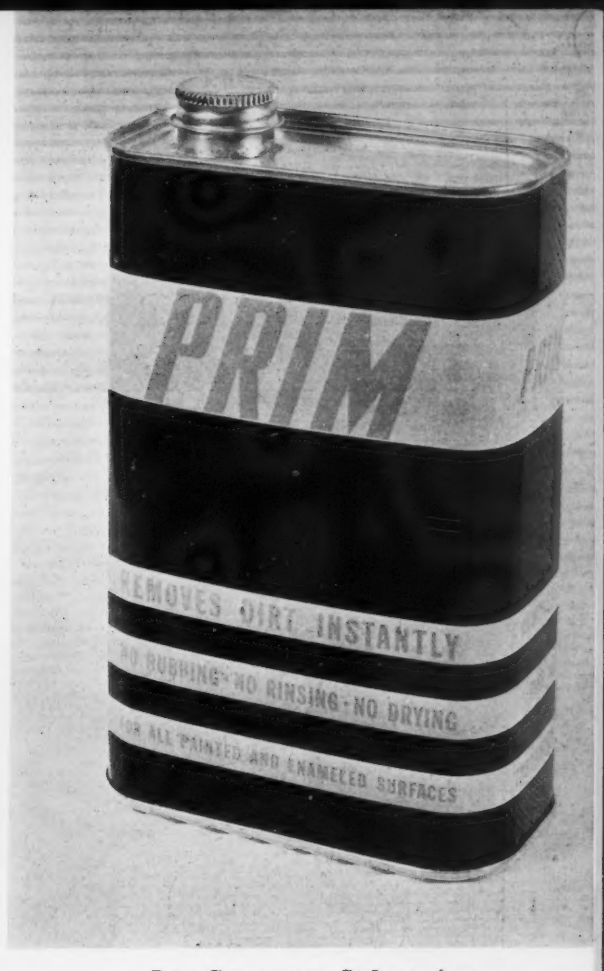
McCormick & Co., have just had American Can Co. redesign their complete line of metal packed products tc bring about a closer family resemblance. Simplicity of design and easy identification were prime considerations.

and Packages

The new baby gift box of Johnson & Johnson, New Brunswick, N. J., seeks to tap a section of the gift soap market. Priced at $1.75, the box contains two each of baby soap and powder, as well as containers of baby cream and baby oil.

◆

"Buttermilk" toilet soap and "Lanolated" toilet soap are currently two of leading department store sellers of Allen B. Wrisley Co., Chicago. Packages contain 20 and 12 cakes, respectively, and each package sells at one dollar.



Prim Corporation, St. Louis, has recently introduced a new liquid cleaner for painted surfaces and household objects. Publicity on this new product is being handled by Gardner Advertising Agency.

RAW MATERIALS

for the soap and allied industries

News....

Amole Soap Co. Sold

Amole Soap Co., Tippecanoe City, O., has been sold to Jack Ledger, of Standard Chemical Co., Dayton, O., and Leon Office, Dayton Food Products, also of Dayton. Amole Soap Co. has been in the soap business for over 50 years, specializing in shaving soaps and shampoos. The new owners plan to expand manufacturing operations.

P&G to Introduce Dentifrice

Procter & Gamble Co., Cincinnati, is planning to introduce a new, liquid dentifrice to supplement its drug store line. The name of the product has not been selected, nor has the date and method of introduction been decided. At present it is being offered in an experimental campaign in Chicago.

Soap Tax Off July 1

As reported in *Soap* last month, the 5 per cent tax on toilet soap, tooth paste and mouth washes which has been in effect since the revenue bill of 1932 was adopted, was eliminated on all sales occurring after June 30, 1938. Sales are ordinarily considered made at law when title passes. It is believed that the elimination of the tax will apply also on sales of shaving soap, lather shaving cream and soap shampoos, as these items have been taxed at 5 per cent as soaps under the 1932 revenue bill.

Cuba Drafts Soap Standards

Cuban soap manufacturers and the Cuban Department of Agriculture are drafting standard specifications for sizes, weights, and packaging of all soaps. Hearings began May 25 and are expected to continue through July. It is expected that when the specifications are adopted, they will apply to imported soaps as well as those of domestic manufacture.

Research Men Discuss Problems

A series of meetings of the newly organized industrial Research

Robert B. Colgate

Institute was held at Atlantic City, N. J., June 17 and 18. R. B. Colgate, vice-president in charge of research for Colgate-Palmolive-Peet Co., Jersey City, N. J., presided at the meetings. Executives directing industrial research for their companies participated in roundtable discussions dealing with administration, organization and personnel problems of their scientific research laboratories. A project was also discussed whereby the Institute would cooperate with American colleges and universities in training research workers along lines required by actual industrial experience.

Fire Destroys Tallow Works

Fire of undetermined origin destroyed the three-story plant of San Jose Tallow Works, San Jose, Calif., last month. Damage was estimated at $30,000.

Soap Employment Index

The index of employment in the soap industry for May, 1938, compiled by the U. S. Dept. of Labor, registered 91.6, as compared with 93.8 in April, 103.3 in May, 1937, and 100 as the three-year average for the period 1923-1925. The payroll index for May, 1938, was 107.2, as compared with 108.5 in April, and 113.3 in May, 1937.

R. W. Hudson Dies

R. W. Hudson, prominent British soap manufacturer, who gave his name to Hudson's soap powder, one of the largest selling lines in the British soap market, died recently at Monte Carlo at the age of 82. Mr. Hudson maintained a hospital at Cannes during the World War, and gave $50,000 to found scholarships for the children of Monaco.

Canada's Per Capita Soap Use

The per capita consumption of soap in Canada during 1937 is estimated at 17 pounds, according to recent figures released by the Dominion Bureau of Statistics. The biggest item consumed was laundry soap, amounting to 34,000 tons. Toilet soap accounted for 19,000 tons, and soap powder 17,000 tons. The amount of shaving soap used was estimated at 475 tons.

Whalers Urged to Conserve

Delegates to the recent International Whaling Conference in England were advised by W. S. Morrison, British Minister of Agriculture, that unless measures of conservation were adopted, whaling enterprises in every country would be destroyed. More than 8,000 whales over the figure of the previous year were killed in 1937, and about 120,000 more tons of oil were marketed.

Green Oil to Reorganize

Green Oil Soap Co., Chicago, has been granted a petition to reorganize under Section 77-B of the Bankruptcy Act. The petition was granted recently by Judge Sullivan of the District Court of the United States for the northern district of Illinois, eastern division. In approving the petition, Judge Sullivan ruled that the company would continue in temporary possession and management of its property and business until a later hearing before the court, when it would be decided whether a trustee or trustees should be appointed for the property of the company, or whether the company should be allowed to remain in permanent possession and control.

CSA Announces Golf Schedule

The Chemical Salesmen's Association, New York, will hold the second in its series of scheduled golf tournaments on July 12, at Garden City Country Club, Garden City, Long Island, N. Y. The third in the series will be held Aug. 16, at Green Meadow Golf Club, Harrison, N. J., and the fourth on Sept. 13, at Shackamaxon Country Club, Westfield, N. J.

P & G Offer Kitchen Aid

Procter & Gamble Co., Long Beach, Calif., is distributing a coupon with each package of "Dash", new granulated soap, entitling the purchaser to a 2-piece kitchen knife set with the return of a "Dash" box top and 25 cents. The set consists of a butcher knife and a utility knife.

H. M. Hooker Succeeds Brother

Harry M. Hooker has been elected president of Hooker Electrochemical Co., Niagara Falls, N. Y., to succeed his brother, the late Elon H. Hooker, who died May 10. Mr. Hooker is a native of Rochester, N. Y., where he attended the University of Rochester. He became associated with Hooker Electrochemical Co. in 1913 as superintendent of construction. In 1921 he was transferred to New York as sales manager, and the following year was elected a vice-president. Mr. Hooker is also a director and secretary of the United States Export Association, and a director of the Chlorine Institute. E. R. Bartlett was elected vice-president and treasurer of the company, and Levi Ward, secretary, has been added to the directorate.

Opens West Coast Branch

Detroit Rex Products Co., Detroit, manufacturer of "Detrex" degreasers, "Perm-a-chlor" and "Triad" solvents, and "Triad" alkali cleaners and strippers, recently opened a branch office at 111 Sutter Bldg., San Francisco. W. A. Vensel is in charge. Warehouse stocks of solvents are being carried for delivery to all points in the territory.

To Build Tallow Plant

Edwin Krause has been granted a building permit for the construction of a tallow plant at 3852 Bandini Boulevard, Los Angeles. The structure will have ground dimensions of 30 x 52 feet, and is estimated to cost $3,200.

Moves to Coast Office

H. Q. Mills, formerly vice-president of Anchor Cap & Closure Corp. and Capstan Glass Co., with headquarters at Long Island City, N. Y., will make his headquarters at the company's San Francisco office after July 1st.

Acquire Texas Plant

Wilson & Bennett Mfg. Co., Chicago, has acquired a new steel drum manufacturing plant at Port Arthur, Tex. The new plant, it is announced, will begin operations in the very near future. Production lines for manufacturing all standard sizes of steel drums and barrels will be installed, providing steel container service throughout the southwest. The Texas unit brings the total number of manufacturing plants owned and operated by the company to four. Other plants are located at Chicago, Jersey City and New Orleans, with sales offices and warehouses in 32 U. S. cities.

Chicago Groups Hold Tourney

The second in the series of golf tournaments scheduled by the golf auxiliary of the Chicago Drug and Chemical Association, and the Chicago Perfumery, Soap and Extract Association, was held June 21st at the Glen Oak Country Club in Glen Ellyn. The following won prizes: Class A, Tom Morgan, first; H. L. Derby, second; T. F. Gilson, third; T. B. Singleton, fourth; Class B, G. Epstein, first; A. J. Anderson, second; H. V. Wallace, third; C. C. Marshall, fourth; Class C, J. A. Gauer, first; C. M. Baldwin, second; F. S. Topper, third; W. H. Schutte, fourth; Class D, A. J. Ratz, first; W. R. Nay, second; K. S. Spraker, third; A. R. Frantz, fourth. Another tournament is scheduled for July 12 at the Medinah Country Club.

Form New Brokerage Firm

Charles T. Taylor & Co., Los Angeles, has been formed to conduct a brokerage business in vegetable oils and tallows. Mr. Taylor was formerly manager of the oil, seed and feed department in the Los Angeles office of M. W. Park & Co.

Appraise Mary Colgate Estate

Miss Mary Colgate, granddaughter of the founder of the Colgate soap business, left a gross estate of $9,907,843, according to an estate tax appraisal filed last month. Examiners in the appraisers' office estimated state taxes on the estate would approach $1,000,000. Miss Colgate was an active church worker and philanthropist up to the time of her death in Yonkers, N. Y., Oct. 24, 1936.

Named Vice President

A. J. Chamberlain, sales manager of the steel package division of Geuder, Paeschke & Frey Co., Milwaukee, has been appointed a vice president of the firm. Mr. Chamberlain will continue in his capacity as manager of the engineering, manufacture and sales activities of the steel container division, and will be assisted, as in the past, by Harvey P. Thelen.

Soap Wage-Hour Hearing in Washington, July 13

REPRESENTATIVES of the soap industry have been invited to attend a hearing of the Public Contracts Board at Washington July 13, when testimony relative to facts gathered by the U. S. Department of Labor in a recent wage survey of the industry for the purpose of determining a prevailing minimum wage, will be heard. Determination of the minimum wage is in accordance with the provisions of the Walsh-Healy Act covering wages paid in plants supplying government purchases in excess of $10,000. A general meeting of the soap industry has been called for Tuesday, July 12, 10:30 A.M., the day before the Washington hearing, at the Hotel Mayflower, Washington, by R. C. Edlund, manager of the Association of American Soap & Glycerine Producers. This meeting, Mr. Edlund advises, is open to all members of the soap industry. Spokesmen will be selected and matters of vital interest to all soap manufacturers will be discussed.

The complete draft of the notice of hearing issued by the Public Contracts Board is as follows:

NOTICE OF HEARING BEFORE PUBLIC CONTRACTS BOARD

Wednesday, July 13, 1938
at 10 a.m.

Room 3229, Dept. of Labor Building, Washington

The Public Contracts Board will hold a hearing at the place and on the date above indicated, to take testimony upon which findings of fact will be made to assist the Secretary of Labor in determining, pursuant to Section 1 (b) of the Public Contracts Act*, the prevailing minimum wages in the Soap Industry. The Soap Industry shall be understood to be that industry engaged in the manufacture of soap in bars, cakes, chips, and flakes, and in granulated, powdered, paste and liquid forms, and glycerin; and of cleansers containing soap, scouring powders, and of shaving soaps and creams containing soap; also of washing compounds containing soap.

At this hearing an opportunity to be heard, either in person or by duly appointed representatives, will be given to persons engaged in the above named industry, either as employers or as employees, to groups of such persons, and to others within the discretion of the Board. Briefs or telegraphic communications may be filed but they should be received by the Board on or before the hearing date. It is suggested that when it is convenient five copies of briefs be submitted. Employers appearing in person, or by representatives, or presenting briefs, should furnish the Board with the following essential data:

(1) Name of firm.
(2) Plant address.
(3) Total number of employees in plant.
(4) Number of male employees.
(5) Number of female employees.
(6) Classification of employees by occupations, including number engaged in each operation.
(7) Hourly wages in each operation with designation of applicable time period.
(8) If paid on piece work basis, weekly earnings in each class of employees.
(9) Hours worked per week.

This outline of suggested data is not meant to exclude the submission of any other pertinent information which an employer may desire to submit.

Employees appearing at the hearing, either in person or by their representatives, or submitting briefs, should acquaint the Board with facts as to the wages now being paid in the industry.

L. METCALFE WALLING,
Administrator.

Dated: June 27, 1938.

* (49 Stat. 2036; 41 U.S.C. Sup. III 35.)

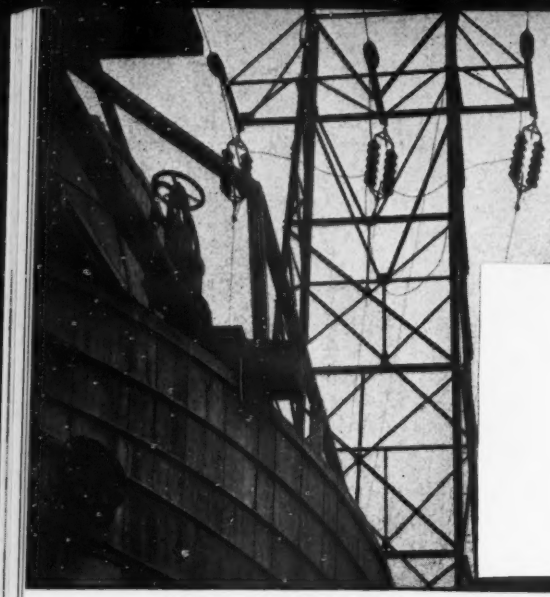
Wage-Hour Bill Becomes Law

The controversial wage-hour bill was signed by President Roosevelt on June 25, and will become effective 120 days from that date. The program aims at a national standard of a minimum wage of 40 cents an hour and a maximum work week of 40 hours to be attained in industry in seven years. The "floor" for wages without provision for sectional or other differentials will be set at 25 cents an hour for all affected industries operating in interstate commerce as soon as the act becomes effective. The standard will be raised to 30 cents after one year. Similarly, a "ceiling" for the standard workweek will be established at 44 hours the first year, to be decreased to 42 in the second year and 40 hours thereafter. Interstate transportation of products manufactured by child labor will be prohibited as soon as the law goes into effect.

Drug Act Becomes Law

The new Federal Food, Drug and Cosmetic Act was signed by President Roosevelt and became a law on June 25. General provisions of the law become effective one year from the date of its signature by the President, or June 25, 1939, with the exception of certain provisions which become effective immediately. These include, in addition to prohibitions against dangerous drugs when used as prescribed on the label, and against the introduction of new drugs before they have been tested, the prohibition against cosmetics which may be injurious to users.

Important respects of interest to the soap and sanitary chemicals industries in which the new law differs from the old Federal Food and Drugs Act of June 30, 1906, are: it has jurisdiction over all cosmetics except toilet soaps, outlawing those which may be injurious to health and prohibiting false or misleading labeling; it requires that antiseptics possess germicidal power; proscribes slack filling of containers for drug and cosmetic products, and authorizes factory inspection of establishments producing those products; it provides increased criminal penalties for violations, and authorizes the Federal courts to restrain violations by injunction; it limits seizure for misbranding to a single interstate shipment of the product, unless the misbranding has been the subject of a prior court decision in favor of the government.



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TRI-SODIUM PHOSPHATE
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TETRA SODIUM PYRO PHOSPHATE

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DIVISION OF WESTVACO CHLORINE PRODUCTS

Asks Soap Contributions

Save the Children Fund, 1 Madison Ave., New York, is sending out appeals for contributions of soap for distribution among the impoverished families of the southern mountain districts. "We need soap," the appeal reads, "and hope manufacturers will heed the great need in the highlands. The people say they cannot wash their clothing because they do not have soap, or money with which to buy it." The organization provides food, clothing, shoes and other forms of welfare for children of poverty-stricken families in rural communities where there are no local charities. The movement is concentrating its work at present in the mountain sections of Tennessee, Kentucky, North Carolina and Virginia.

Allied Trades Elects Howe

W. C. Howe, Speare Supply Co., Chicago, was elected president of the Laundry and Cleaners Allied Trades Association at the recent convention at Hot Springs, Va. Also elected were: Albert Matthews, American Laundry Machine Co., Cincinnati, vice president, laundry division; E. G. Eckerman, Davies-Young Soap Co., Dayton, O., vice president, dry cleaning division; N. S. Dahl, John T. Stanley Co., New York, treasurer; and Arthur D. Frey, Frey Bros., Cincinnati, secretary.

Bobrick Opens N. Y. Office

Bobrick Manufacturing Corp., soap dispenser manufacturers, who were formerly represented in the New York district by M. B. Feinson, operating under the name of the Bobrick Dispenser Co., have now opened their own direct factory branch at 15 East 26th St. Mr. Feinson will continue operations as the American Dispenser Co. at 215 4th Ave., New York. A. L. Bobrick who has in the past made his headquarters with the western division of Bobrick Manufacturing Corp. at 111 S. Garey St., Los Angeles, is at present in New York supervising the opening of the new branch and will remain for five or six months. He advises that complete stocks of "Sop-O-zoN" dispensers will be carried in New York and that the company will adhere strictly to a policy of selling only the soap manufacturer and jobber.

Announce Premium Exposition

The Premium Advertising Association of America has announced an Atlantic Coast Premium Exposition, the fourth of its kind, to be held at the Hotel Astor, New York, Sept. 12 to 16. The Association elected the following officers at its recent annual meeting: W. L. Stweet, Rumford Chemical Works, Providence, R. I., president; M. H. Richards, Colgate-Palmolive-Peet Co., Jersey City, N. J., vice-president; E. W. Porter, Premium Service Co., New York, vice-president; J. M. Davidson, Colgate-Palmolive-Peet Co., Jersey City, N. J., treasurer; C. W. Dunn, New York, counsel; and Howard W. Dunk, New York, secretary.

C. V. Lambe Joins Vulcan

Charles V. Lambe, formerly with Continental Can Co., Chicago territory, has joined the sales staff of Vulcan Stamping & Manufacturing Co., steel container manufacturer, Bellwood, Ill. Mr. Lambe has had eleven years' experience in the manufacturing and selling of containers. The Vulcan Company expanded the manufacturing facilities of its Bellwood branch recently, and moved its general offices, formerly located at the parent factory in Chicago, in Bellwood.

New Hazel-Atlas Line

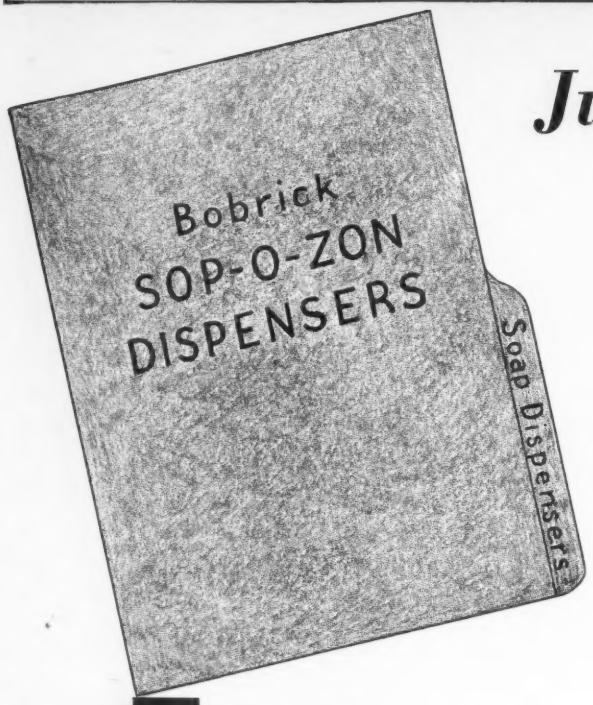
Hazel-Atlas Glass Co., Wheeling, W. Va., has just introduced a new line of bottles called "Masculine," designed for toilet goods for men. "Mascu-line" bottles, says the manufacturer, have been created to meet the requirements of manufacturers who are looking for a package that is exclusively for male needs. Vertically ribbed to prevent slipping, they are made to fit the bathroom cabinet or traveling kit. From the standpoint of the packer, they have been shaped, it is claimed, so as to be adaptable to any automatic labeling machine, and with adequate labeling space. They have been designed with straight sides and low gravity center to prevent upsets on the filling line. The bottles are supplied with a regular finish for ordinary lotions, and with a sprinkler finish for concentrated products. Sizes include two, three, six and eight ounce bottles.

Homestead Valve Catalog

Homestead Valve Mfg. Co., Coraopolis, Pa., has published a catalog illustrating and describing its line of valves and industrial cleaning equipment. Prices included. Copies available on request.

Seydel Chemical Booklet

Seydel Chemical Co., Jersey City, N. J., has recently published a booklet on the history and use of sodium benzoate. Copies available on request.



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Report on Soap Standards

The report of committee D-12 on soaps and detergents of the American Society for Testing Materials was presented to the society, July 1, at the 41st annual meeting held at Hotel Chalfonte-Haddon Hall, Atlantic City, June 27-July 1. Harry P. Trevithick of the New York Produce Exchange, general chairman of committee D-12, and B. S. Van Zile, of Colgate-Palmolive-Peet Co., secretary of the committee, were in Atlantic City to make the presentation. After submission to the society, the new specifications for soaps and soap products included in the report were to be subject to adoption or further study by special committees of the ASTM.

The next meeting of committee D-12 will be held in New York in October, according to present arrangements. Announcements will be mailed at a later date by secretary Van Zile.

The report included new tentative specifications for white floating toilet soap, chip soap, powdered laundry soap and ordinary laundry bar soap, as well as the following new tentative methods: test for particle size of soaps; determination of combined sodium and potassium oxides in soaps; chemical analysis of sulfonated oils; and chemical analysis of special detergents.

Revised tentative specifications were submitted for milled toilet soap and soda ash, and the committee also offered revised tentative definitions of various soap and detergent terms. Specifications previously adopted as tentative were recommended to be made standard for caustic soda and modified soda. Methods of sampling and chemical analysis of soaps and soap products, previously tentative, were also recommended to be made standard.

In the new proposed tentative specification for chip soap (D-38 T) an important change has recently been made in the method of payment provided on contract purchases. The two paragraphs, (d) and (e) under Basis of Purchase, now read as follows:

At the first CSA golf outing at Baltusrol, N. J. Herb Kranich, Kranich Soap, Jack Leppart of Columbia Alkali, Bart Sheehan of Grasselli and Ira Vandewater of Greef. Above right, Dick Quortrop and the Barrett contingent. Below, Kelly of Hagerty, Vandewater, Merrill and Kranich.

(*d*) When the material conforms to these specifications on a calculated 10.0 per cent moisture and volatile matter basis the net weight of the material to be paid for shall be calculated as follows:

$$\text{Net weight of material to be paid for on 8 per cent moisture and volatile matter basis} = \frac{\text{Net weight as received} \times (100 - \text{percentage of loss at 105 C.})}{92}$$

(*e*) In the event that the calculation under Paragraph (*d*) results in a figure greater than 100 per cent, due to low moisture content at the time of cutting, weighing and packing, the seller waives the right to invoice the purchaser for any amount in excess of 100 per cent.

Another important change was made in the new proposed tentative specification for powdered laundry soap (D-38 T). A minimum content of 89 per cent anhydrous soap has now been included in paragraph 3, dealing with Chemical Composition, which means that alcohol-soluble material, previously admitted as soap, will not now so classify.

Our article, "New Equipment Via Government Loans," by Arnold Kruckman, originally scheduled for the July issue of SOAP, will not appear until August. If you feel that new capital would be particularly useful at this time to aid in modernizing and re-equipping your plant, you can find out just how to obtain it by reading Mr. Kruckman's informative article.

Publish Laundry Soap Survey

A survey of laundry soap sold in 16 cities, recently published by the Scripps Howard newspapers, revealed a preference for yellow soap in the East, and white in the West. For example, "Fels-Naptha" was favored by 55 per cent of the families in Cleveland. The same preference was shown in Toledo. In San Francisco, however, "Crystal White" enjoyed majority preference, and in San Diego it was "Ivory."

New Jap Fatty Acid Process

Fatty acids which may be made into soap without the addition of tallow may be produced from fish oil at a cost warranting success as a commercial enterprise, according to an announcement by the Osaka Experimental Laboratory, Osaka, Japan, by a process invented

You can save on

PERFUMING COSTS

. . . and still maintain quality

BERGAMOT ARTIFICIAL NORDA is the answer. It meets the most exacting requirements . . . and in view of the present high price of the natural oil, BERGAMOT ARTIFICIAL NORDA offers a material saving in perfuming cost without sacrifice of quality.

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by Dr. Gen Matsumoto of the Laboratory. The process is claimed to be an entirely new method. Its principal features are that the fish oil is first converted into glycerine and fatty acid; the latter further split by vacuum distillation into two groups, one with smaller molecules constituting 65 per cent of the total and the other containing the larger molecules accounting for 25 per cent. The former, when treated by a hydrogenation process, transforms into a fatty acid embodying all desirable properties of tallow and may be made into toilet soap, candles and similar articles. The other fraction may be used as a substitute for China wood-oil and other fast-drying paint bases, it is claimed.

Japanese Soap Exports Up

Japanese exports of laundry and toilet soaps increased almost 70 per cent during the month of April, 1938, compared with the corresponding month of 1937. The value of exports was 387,366 yen in April, 1938, and 229,396 yen in April, 1937.

Experiment with Odor

Irving Langmuir, Nobel prize winner in physics, recently described an interesting experiment performed by Henri Devaux, of Paris, which offers a clue as to what becomes of the odor of a rose. A little mercury was allowed to spread into a small pool. Its surface was scraped chemically clean and then sprinkled over with talcum powder. A rose petal was then held over the powdered surface, but without touching it. The talc moved away on all sides directly beneath the rose petal and collected around the edges of the pool. It was moved by the odor which fell on the mercury surface and spread itself over it in a smooth layer, invisible and not perceptible to the nose. The presence of the odor was proved by carefully pushing sides of the invisible layer together with two glass rods. Upon this, some of the odor rose from the surface of the mercury and could be smelled. This showed that the odor formed a layer on the mercury one molecule thick. When this thickness was increased, part of the odor rose into the air, thus becoming perceptible to the nose. *Progressive Perfumery and Cosmetics*, April, 1938.

Dreyer and Fischbeck Merge

P. R. Dreyer Inc., and Charles Fischbeck Co., both of New York, have consolidated under the firm name of P. R. Dreyer Inc. Location of the newly merged firm is at 119 W. 19th St., which had been the address of Charles Fischbeck Co. Under the reorganization, officers of the company are: F. C. Theile, president; Charles Fischbeck, vice president; Fred J. Beyer, vice president; Paul Schaupp, treasurer; D. T. Shea, secretary; A. R. Brenneis, assistant secretary; and H. A. Wiedman, sales manager. P. R. Dreyer Inc., was established in 1922 by the late Peter R. Dreyer. F. C. Theile joined the company in 1922 as vice president, and on the death of Mr. Dreyer in 1932, he became president. Charles Fischbeck Co. was established early in 1936 by Mr. Fischbeck, after over 25 years experience in the essential oil business.

Fred C. Theile

Charles Fischbeck

Wants Soap Agency

A concern in San Juan, Puerto Rico, is interested in establishing an agency arrangement for the sale of toilet soaps of American manufacture. Interested parties may secure further information through the U. S. Bureau of Foreign & Domestic Commerce, Washington, inquiry 6877.

Drug Section Hears Landis

Dr. Walter S. Landis, vice-president, American Cyanamid Co., New York, was a recent speaker at a luncheon meeting of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, at the Hotel Pennsylvania, New York. His subject was "Inflation."

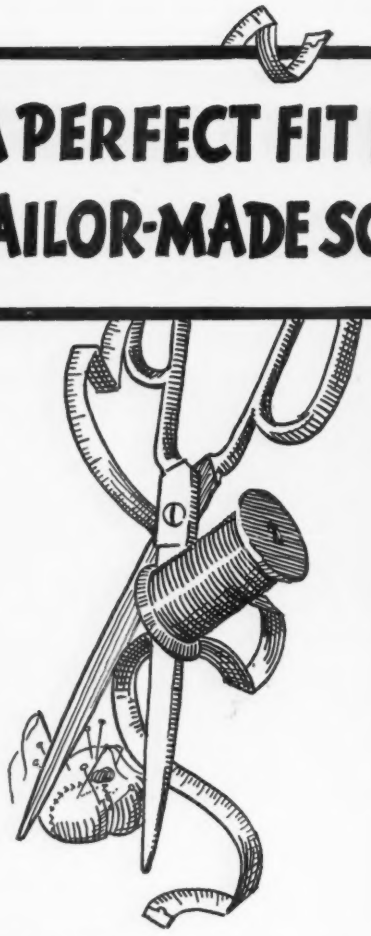
Leonhardt Returns from Europe

F. H. Leonhardt, president of Fritzsche Brothers, Inc., aromatic chemicals, New York, accompanied by Mrs. Leonhardt, returned from Europe June 16. While in Europe, they were joined in Paris, France, by Dr. Guenther, research director for the Fritzsche organization.

CSA Members Golf

The Salesmen's Association of the American Chemical Industry held its initial golf tournament of the season June 14 at Baltusrol Golf Club, Short Hills, N. J. Approximately seventy-seven members participated in the tournament. Charles Slater, of J. T. Baker Chemical Co., won low net and Joseph de Raismes, of Bakelite Corp., turned in a low gross 73 to win the prize for guests. Other prizes were awarded to Edward S. Burke, De Witt Thompson, of Mathieson Alkali Works, and Donald Campbell.

A PERFECT FIT FOR TAILOR-MADE SOAPS



SOAP PRODUCTS and detergents for special purposes have a considerable market. Get a large share of it by building your special soaps with PQ Silicates of Soda.

From the PQ line of over thirty different brands, you can depend on obtaining a correct silicate of soda to fit your private formulae. Do you need a liquid silicate, a solid, a powder or soluble crystals? Let us help you select the best for your detergent.

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PQ

Reg. U.S. Pat. Off.

P. Q. SILICATES OF SODA

Contracts Awarded

Ft. Sam Houston Soap Awards

Kirkman & Son, Brooklyn, were awarded a contract for 215,400 pounds of laundry soap at 3.65 cents in a recent opening by the U. S. Army Quartermaster at Fort Sam Houston, Tex. On two lots of grit soap, 25,000 cakes and 14,600 cakes, Conray Products Co., New York, was awarded the contract at 3.08 cents and 2.8 cents respectively.

Chicago Soap Awards

Day & Frick, Philadelphia, were awarded a contract for 118,000 cakes of grit soap at 1.7 cents in a recent opening by the U. S. Army Quartermaster at Chicago. On 6,000 cakes of toilet soap, Armour & Co., Chicago, were awarded the contract at 9.1 cents. On 678,420 cakes of laundry soap, Hecker Products Corp., New York, was awarded the contract at 3.19 cents. On 300,000 cakes of laundry soap, Samuel M. Sher Co., Chicago Heights, Ill., was awarded the contract at 3.05 cents. On 1,080 pounds of chip soap, Chicago Sanitary Products Co., Chicago, was awarded the contract at 6.2 cents.

Low Treasury Dept. Bidders

Conray Products Co., New York, and Unity Sanitary Supply Co., New York, were both low bidders on 8,125 pounds of grit soap at 3.94 cents in a recent opening by the Procurement Division of the U. S. Treasury Dept. at Washington. On 150,000 pounds of laundry soap, Hercules Powder Co., Easton, Pa., was low bidder at 1.78 cents. On 36,000 pounds of toilet soap, J. Eavenson & Sons, Camden, N. J., were low bidders at 8.19 cents.

Low Soap Bidders

Armour & Co., Chicago, were low bidders on 9,000 cans of cleanser at 2.4 cents in a recent opening by the U. S. Marine Corps Quartermaster at Washington. On 7,200 pounds of sweeping compound, Imperial Products Co., Philadelphia, was low bidder at 1.25 cents. On 10,000 pounds of soap powder, Procter & Gamble Distributing Co., Cincinnati, was low bidder at 3.11 cents. On 100 pounds of castile soap, Industrial Distributors, Washington, were low bidders at 10.2 cents. On 4,025 pounds of chip soap, John T. Stanley Co., New York, was low bidder at 6.25 cents. On 20,000 pounds of laundry soap, Armour & Co., Chicago, were low bidders at 3.64 cents.

Low Green Soap Bidder

James Good, Inc., Philadelphia, was low bidder on 6,000 pounds of green soap at $564 in a recent opening by the Procurement Division of the U. S. Veterans Administration at Washington.

Low Bronze Polish Bidder

Uncle Sam Chemical Co., New York, was low bidder on 1.500 gallons of bronze polish at 95.5 cents in a recent opening by the U. S. Post Office Dept. at Washington.

Low Treasury Dept. Bidders

Hunnewell Soap Co., Detroit, was low bidder on 12,000 cakes of grit soap at 1.9 cents in a recent opening by the Bureau of Supply of the U. S. Treasury Dept. at Washington. On 5,040 pounds of laundry soap, J. Eavenson & Sons, Camden, N. J., were low bidders at 2.02 cents.

Low Panama Canal Bidders

John T. Stanley Co., New York, was low bidder on 3,750 pounds of laundry soap at $126.75 in a recent opening by the Bureau of Supply for the Panama Canal at Washington. On 10,000 pounds of soap powder, Colgate - Palmolive - Peet Co., Jersey City, N. J., was low bidder at $320.40.

Gillam Soap Awarded Contract

Gillam Soap Works, Fort Worth, Tex., was awarded a contract on 2,160 pounds of soap chips for Fort Ringgold, Tex., in a reccnt opening by the U. S. Army Quartermaster at Fort Sam Houston.

British Soap Exports Drop

United Kingdom exports of soaps declined 25 per cent for the first quarter of 1938, as compared with the same period in 1937. The total for the first 1938 quarter was 15,758,100 pounds, worth $1,253,745, while the total for the 1937 quarter was 20,725,000 pounds, worth $1,569,515.

Fair Trade Bill for D. C.

The U. S. House of Representatives has recently approved a fair trade bill for the District of Columbia similar to laws in some forty-three states permitting price-maintenance contracts on trade-marked commodities. The bill has not yet been acted on in the senate and probably will not be this session.

New Bobrick Dispenser

Bobrick Mfg. Corp., New York and Los Angeles, manufacturer of "Sop-O-zoN" dispensers, is bringing out a new powdered soap dispenser the chief feature of which is said to be its unusual construction. Similar in appearance to the conventional push-in liquid type soap dispenser, it has one operating part, which is the plunger. The construction of the plunger, it is claimed, will enable the dispenser to dispense any kind of granulated, powdered, flaked, beaded or abrasive soap, without jamming or sticking. An agitator spring inside the bowl agitates the soap at each press of the plunger.

Antiseptic Cleaner

Antiseptic washing products contain a water-soluble salt of mercury, silver or gold, and an aliphatic sulfuric or phosphoric ester having wetting and washing properties and containing a radical of at least 10 carbon atoms. Other appropriate substances may be included. I. G. Farbenind. A.-G. German Patent No. 657,116.

ONE OF THESE MAY BE YOUR ANSWER TO LOWER COSTS, AN IMPROVED PRODUCT .....or BOTH!

JAVOLLAL

A substitute for Oil Citronella; more stable and nearly three times as strong.

RECOMMENDED for use in soaps, insecticides, stock and cattle sprays and other technical products.

ADVANTAGES: Odor character is finer, cleaner, pleasanter and more stable than Citronella; cuts material costs 50% and over.

SAFRELLA

An effective substitute for Artificial Sassafras; about the same in strength and odor.

RECOMMENDED for use in laundry soaps, low priced toilet soaps, insecticides, germicides and other technical products.

ADVANTAGES: Odor more penetrating, and lower in cost than Artificial Sassafras.

METHALATE "C"

A low cost substitute for Methyl Salicylate (Synthetic Wintergreen); equal in concentration, coverage and tenacity.

RECOMMENDED for use in fly sprays, fixed animal and vegetable oils used in paints and low grade soaps, and in many other technical products.

ADVANTAGES: Provides complete coverage of objectionable odors with savings of 15-20% in cost over Methyl Salicylate.

NEUTROLEUM

A powerful, low cost deodorizing agent.

RECOMMENDED for use in liquid insecticides, waxes, polishes, glues, linoleums, inks, paints, varnishes, cleaner's naphtha, para blocks, naphthalene, turpentine substitutes, solvents, diluents, petroleum and rubber solvents, etc.

ADVANTAGES: Increases sales appeal by permanently eliminating product's objectionable odor at negligible cost.

These aromatic specialties have behind them the practical endorsement of hundreds of satisfied users. One of them may be the means of reducing your costs, improving your product . . . or both! Why not write us for free testing sample and detailed suggestions for use . . . TODAY?

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  Your basic materials should be the finest that modern methods and scientific skill can produce. In using FRITZSCHE'S Essential Oils you are assured matchless purity and dependability.

- **AROMATIC CHEMICALS**

  Large selection and superlative quality characterize the materials in this group. Use them for finer aromatic effects and for greater economy.

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  We carry a complete line of fixatives, including Rose Crystals, one of the best all-around fixatives, also a group of Artificial Animal Scents—Musk, Civet, Castoreum and Ambergris—especially adaptable to soap making.

- **ANTI-OXIDANTS**

  These newly developed preservatives for soaps, animal and vegetable fats and oils are highly important to the soap manufacturer. Write us for full details concerning Oxidex.

- **BATH SALT PERFUMES**

  Combining perfume and color, our delightful Bath Perstels greatly simplify and facilitate the process of manufacture. Very economical. Complete information and list of blends will be sent upon request.

- **INSECTICIDES AND DISINFECTANTS**

  All materials offered by us under this heading are the results of years of research applied to this increasingly important phase of perfuming. Selection from the FRITZSCHE catalog assures uniform and unvarying quality of odor.

- **DEODORIZING COMPOUNDS**

  Technical products such as para blocks, naphthalene, cleansers, waxes, polishes, solvents, diluents, etc., require good, dependable deodorizing compounds in their formulae. For effective, low cost coverage we offer and recommend Neutroleum, Safrella, Javollal, Methalate "C", and others. See our advertisement page opposite.

- **TOILET SOAP COMPOUNDS**

  Perfumes in this group have been specially prepared to meet the exacting demands of soap manufacture. Exquisite scents at a minimum cost. Consult our catalog.

- **LIQUID SOAP AND SHAMPOO PERFUMES**

  These perfumes are highly soluble and mix readily with liquid soaps. Simple to use, cost limits and strength of odor desired determine quantity required.

- **DENTAL AND ORAL FLAVORS**

  These flavors are of a special character, skillfully blended to impart pleasant, clean, refreshing taste effects. We are prepared also to create special flavor blends according to your specifications and for your exclusive use. Consult us freely.

- **SOAP COLORS**

  We supply soap colors to produce any desired tint. Send us description or sample of color to be matched for our specific recommendations.

Awarded Honorary Degree

George W. Merck, president, Merck & Co., Rahway, N. J., was awarded the degree of Doctor of Pharmacy, honoris causa, for outstanding service in fields allied to public health in the development of newer medicinals, at the recent annual commencement of the Philadelphia College of Pharmacy and Science, in Philadelphia.

A. C. Brode Dies

A. C. Brode, 63, vice president in charge of sales and advertising, Los Angeles Soap Co., Los Angeles, died recently after a short illness. He had been with the company for 40 years. He is survived by three sisters and a brother.

Modern Cosmetics, by Francis Chilson. The second edition of this practical book on cosmetic manufacture has been materially revised and improved. Many of the formulas of the first edition have been eliminated and additional formulas, declared to be tested, have been added. As in the first edition, emphasis has been placed on production methods and equipment, and a separate chapter is given over to plant layout. Subject matter is of course confined mainly to cosmetics, but separate sections do consider such soap products as shampoos, liquid soaps, shaving creams and toilet soaps.

In his short section on soaps, the author does not seem to be in as complete control of his subject as elsewhere. To quote briefly, he says "The principal object of the investigator is to learn to recognize when the soap is completely saponified and he should learn the tests for free alkali. With such ground work, he will have little difficulty in making any kind of cosmetic soap. He will know how to increase lather and decrease stickiness; he will know how to adjust consistency and maintain clarity over an indefinite period." This simple key to all the problems of soap manufacture must be the magic formula for which experienced soap makers have been seeking so long.

Maintain Sudsing Power!

•

Improve Appearance!

•

Produce Better Soap at Less Cost!

How to reduce production costs and yet not sacrifice quality . . . that is so often the question! Manufacturers of bar soaps, chips, flakes and powders, find the answer in Standard Silicates. Through their use you can effect real economies while improving appearance. The result is a better soap that can be sold at competitive price levels, *high in quality and equal in sudsing power!*

Our technical staff will help you meet your problem!

S-4-38

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New Trade Marks

The following trade-marks were published in the June issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

CAMEO—This in solid letters with drawing of cameo, describing household cleaner. Filed by Cameo Corp., Minneapolis, Dec. 8, 1937. Claims use since May 10, 1937.

SOLVIN—This in solid letters describing liquid cleansers for toilets. Filed by Acme Chemical Co., Milwaukee, Feb. 5, 1938. Claims use since Nov. 22, 1916.

INK OFF—This in solid letters with drawing of hand, for powdered soap for removing duplicating machine inks. Filed by Kletam Mfg. Co., Wilkes-Barre, Pa., Feb. 7, 1938. Claims use since June 15, 1935.

HEP—This in solid letters describing soap. Filed by Howard E. Pillsbury, Newburyport, Mass., March 16, 1938. Claims use since Feb. 21, 1938.

PYLAC—This in solid script describing detergent. Filed by Harold Weed McCulloch, Belleville, N. J., March 21, 1938. Claims use since Feb. 1937.

SCADU—This in solid letters describing cleaner for artificial dentures. Filed by Orville E. McKim, Port Chester, N. Y., April 13, 1938. Claims use since April 1, 1938.

ZAPONEX—This in solid letters describing hand cleaners. Filed by Atlas Powder Co., Wilmington, April 15, 1938. Claims use since March 7, 1938.

ZEMAGON—This in solid letters describing treatment for athlete's foot. Filed by Michael J. O'Connor, Alliance, Nebr., Nov. 29, 1937. Claims use since July 1, 1934.

WELLESLEY—This in solid letters surrounded by ornamental design describing antiseptic mouth wash. Filed by McGreevey, Werring & Howell, Inc., New York, Jan. 20, 1938. Claims use since Jan. 8, 1938.

OUTRE MER—This in solid letters describing bath salts. Filed by Etablissements Rigaud, Inc., New York, Jan. 24, 1938. Claims use since Jan. 17, 1938.

TYPHON—This in solid letters describing bath salts. Filed by Etablissements Rigaud, Inc., New York, Jan. 24, 1938. Claims use since Jan. 17, 1938.

UTRA JEL—This in solid letters describing antiseptic water soluble jelly. No claim is made to the word "Jel" apart from the mark. Filed by Pynosol Laboratories, Inc., Chicago, Feb. 19, 1938. Claims use since April 10, 1934.

OILZO — This in solid letters describing germicide. Filed by Holbrook Pharmacal Co., New York, March 14, 1938. Claims use since Nov. 1, 1937.

WOODHUE—This in solid letters describing shampoos. Filed by Faberge, Inc., New York, March 22, 1938. Claims use since Oct. 20, 1937.

WOODWIND—This in solid letters describing shampoos. Filed by Faberge, Inc., New York, March 22, 1938. Claims use since Oct. 20, 1937.

SALZOL—This in solid letters describing preparation for athlete's foot. Filed by Salzol Co., Fort Worth, Tex., March 28, 1938. Claims use since Feb. 3, 1938.

BARR'S—This in solid letters on geometric design describing insecticide. Filed by Michael P. Barr, New York, March 31, 1938. Claims use since March 28, 1938.

FILM FLOTE—This in solid script describing stain remover for teeth. No claim is made to the word "Film" apart from the mark. Filed by Film Flote Co., Miami, Fla., April 4, 1938. Claims use since Feb. 6, 1938.

LIZZOLITE—This in solid letters describing dentifrice. Filed by A. Lizzola Co., New York, April 7, 1938. Claims use since March 1, 1938.

PANACTOL—This in solid letters describing germicide. Filed by Loeser Laboratories, Inc., New York, April 12, 1938. Claims use since March 30, 1938.

SPRA-O-WAY — This in solid letters describing cleaning fluid. Filed by Spra-o-way Products Co., Seattle, Jan. 7, 1938. Claims use since Jan. 28, 1937.

FEM-I-GENE — This in solid letters describing antiseptic. Filed by Fem-i-gene Laboratories, Oakland, Calif., March 1, 1937. Claims use since March 11, 1936.

TERMAX SUN RAY — This in solid letters describing insecticide. No claim is made to the words "Sun" and "Ray" apart from the mark. Filed by Termax Co., Minneapolis, Jan. 14, 1938. Claims use since Sept. 15, 1928.

EXCITING—This in solid letters describing bath salts. Filed by Jay-Thorpe, Inc., New York, Jan. 25, 1938. Claims use since Dec. 1, 1937.

THIS WITH THAT — This in solid letters describing shampoos. Filed by Jay-Thorpe, Inc., New York, Jan. 31, 1938. Claims use since Dec. 1, 1937.

SUPER SUDS—This in solid letters describing soap containers sold empty. Filed by Colgate-Palmolive-Peet Co., Jersey City, N. J., March 12, 1938. Claims use since Jan. 25, 1938.

GOLDYLOCKS — This in solid letters describing scouring materials. Filed by Metal Textile Corp., West Orange, N. J., Dec. 6, 1937. Claims use since July 20, 1937.

SANI-SHEEN — This in solid letters with head of man and woman, describing shampoos. Filed by A. William Webster Co., Memphis, Oct. 2, 1937. Claims use since June 10, 1937.

SALBA—This in solid letters within circle, describing antiseptic.

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When your cleaner or soap is sprayed the modern Dobbins way.

More efficient application, finer results, more and bigger sales are assured.

Simplifies janitor duties. Just spray it on and mop it up!

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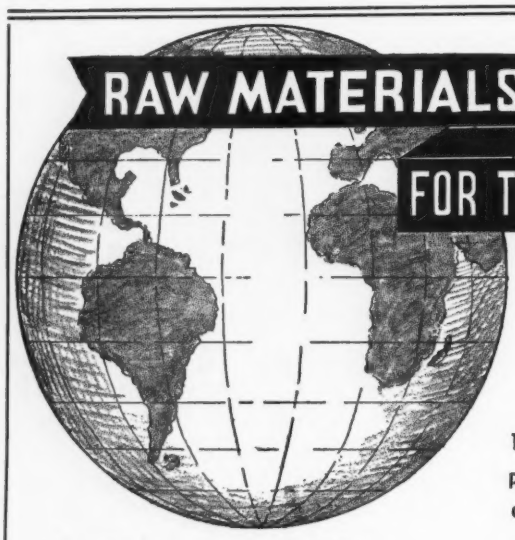
RAW MATERIALS
FOR THE SOAP INDUSTRY
FROM ALL PARTS OF THE WORLD



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100 years of honest trading without misrepresentation have proven to the consuming trade the dependability of the quality of the goods we have to offer.

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Soya Bean Oil
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Fatty Acids
Lard Oils
Neatsfoot Oil
Oleo Stearine
Stearic Acid
White Olein
Tallow
Grease
Lanolin
Caustic Soda
Soda Ash
Caustic Potash
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Silicate Soda
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Tri Sodium Phosphate
Di Sodium Phosphate
Chlorphyll
"CEREPS" Superfatting Agent

WELCH, HOLME & CLARK CO., Inc.
563 GREENWICH STREET ESTABLISHED 1838 NEW YORK CITY

Filed by Lucie H. Smith, Duluth, Minn., Feb. 12, 1938. Claims use since Jan. 18, 1938.

SANTOBRITE — This in solid letters describing insecticides. Filed by Monsanto Chemical Co., St. Louis, March 28, 1938. Claims use since April 2, 1936.

SMACK—This in solid letters describing insecticides. Filed by Lin-Tox Corp., Port Chester, N. Y., April 14, 1938. Claims use since Dec. 1, 1937.

Cartoon figure holding a carton of the product, describing detergent. Filed by Phosphate Mining Co., New York, Feb. 17, 1938. Claims use since Feb. 11, 1938.

PINE-O-CLEEN—This in shaded letters describing cleansing preparation. No claim is made to the words "Pine" and "Clean" apart from the mark. Filed by Fairfield & French, Philadelphia, March 21, 1938. Claims use since March 2, 1938.

MISS JEZEBEL—This in solid script describing soaps. Filed by Elizabeth Arden, Inc., New York, April 8, 1938. Claims use since April 1, 1938.

GLISTEREE—This in solid letters describing liquid glass cleaner. Filed by Universal Utility Co., Gloversville, N. Y., April 13, 1938. Claims use since April 6, 1938.

REGNEW — This on reverse plate, triangular shaped, describing insect repellent. Filed by Regnew Laboratories, Madison, Wis., Dec. 10, 1937. Claims use since March 12, 1936.

Orange and black label in geometric design, describing insecticides. Filed by Stanco, Inc., Wilmington, Feb. 21, 1938. Claims use since April 11, 1935.

LONESOME TRAIL ROACH DESTROYER—This in solid letters with drawing of roaches, describing roach powder. No claims is made to the words "Roach Destroyer," "Lone" or "Trail" apart from the mark. Filed by Vernon J. Billimack, St. Louis, March 25, 1938. Claims use since March 17, 1938.

CYN—This in solid letters on geometric design describing germicide. Filed by James A. Smith, Philadelphia, March 28, 1938. Claims use since March 1, 1938.

DIXRIP—This in solid letters describing floor brushes. Filed by Dixon & Rippel, Newark, N. J., March 8, 1938. Claims use since Feb. 4, 1924.

SHAKE-AWAY — This in solid letters describing mops. Filed by O-Cedar Corp., Chicago, April 6, 1938. Claims use since March 1, 1935.

Trade Marks Granted

356,541. Polishing Powder. Tri-State Development Corp., Burnsville, N. C. Filed Sept. 8, 1937. Serial No. 397,235. Published Nov. 30, 1937. Class 4.

356,573. Polishing Cloth. John Ritzenthaler, New York. Filed Nov. 17, 1937. Serial No. 399,857. Published Feb. 22, 1938. Class 4.

356,595. Soap. Marx & Kushner, New York. Filed Dec. 7, 1937. Serial No. 400,565. Published Feb. 22, 1938. Class 4.

356,689. Cleansing Cream. Los Angeles Soap Co., Los Angeles. Filed May 3, 1937. Serial No. 392,229. Published June 29, 1937. Class 6.

356,698. Household Insecticide. Smith Mfg. Co., Utica, N. Y. Filed June 23, 1937. Serial No. 394,435. Published Feb. 15, 1938. Class 6.

356,714. Insecticides. James B. Irwin, Coral Gables, Fla. Filed Sept. 4, 1937. Serial No. 397,116. Published Feb. 15, 1938. Class 6.

356,786. Shampoo for Dogs. Zenith Products Co., Wellsville, O. Filed Dec. 9, 1937. Serial No. 400,627. Published Feb. 22, 1938. Class 6.

356,804. Saponaceous Compounds. Shulton, Inc., New York. Filed Dec. 16, 1937. Serial No. 400,934. Published March 1, 1938. Class 4.

356,822. Antiseptic Preparations. Katz Drug Co., Kansas City. Filed Dec. 22, 1937. Serial No. 401,147. Published Feb. 22, 1938. Class 6.

356,875. Soap Powders. Joe Perryman, Columbia, Ky. Filed Jan. 5, 1937. Serial No. 387,474. Published March 8, 1938. Class 4.

356,896. Liquid Solvent Used in Dry Cleaning. Barrett Co., New York. Filed Sept. 7, 1937. Serial No. 397,171. Published March 8, 1938. Class 4.

356,927. Furniture Polish. Kactus Oil Products Co., Denver. Filed Dec. 18, 1937. Serial No. 401,025. Published March 8, 1938. Class 16.

356,997. Insecticides. Pacific Guano Co., San Francisco. Filed Dec. 12, 1935. Serial No. 372,579. Published March 8, 1938. Class 6.

357,020. Antiseptic Hand Lotion. J. Saul Tepper, Baltimore. Filed June 29, 1937. Serial No. 394,683. Published March 8, 1938. Class 6.

357,021. Mouth Wash. Chicago Pharmacal Co., Chicago. Filed July 9, 1937. Serial No. 395,018. Published March 8, 1938. Class 6.

357,030. Insecticides. Usalco Merchandising Co., New York. Filed Aug. 11, 1937. Serial No. 396,289. Published March 8, 1938. Class 6.

357,040. Shampoo. Victor M. Rubon, San Francisco. Filed Sept. 18, 1937. Serial No. 397,555. Published March 15, 1938. Class 6.

357,069. Treatment for Athlete's Foot. A. P. Sardou Laboratories, Albany, N. Y. Filed Nov. 18, 1937. Serial No. 399,906. Published March 8, 1938. Class 6.

357,094. Disinfectants. American Disinfecting Co., Sedalia, Mo. Filed Dec. 10, 1937. Serial No. 400,674. Published March 15, 1938. Class 6.

357,105. Bath Salts. Arcabe, Inc., New York. Filed Dec. 14, 1937. Serial No. 400,823. Published March 8, 1938. Class 6.

357,112. Insecticide. R-A-K Laboratories, Philadelphia. Filed Dec. 15, 1937. Serial No. 400,888. Published March 8, 1938. Class 6.

357,148. Insecticides. Dow Chemical Co., Midland, Mich. Filed Dec. 28, 1937. Serial No. 401,299. Published March 15, 1938. Class 6.

(*Turn to Page* 127)

GET RIGHT *at the* START!

IF YOUR PRODUCT IS TO BE O. K. YOUR SUPPLY SOURCE MUST BE RIGHT

You can find no better source than this for

WAXES

We have specialized on Waxes for years. The market affords nothing better or more uniformly reliable for their purposes—than ISCO Waxes.

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ISCO Processing minimizes tackiness so that, used in polishes, ISCO REFINED CANDELILLA is free from the "drag" associated with ordinary Crude Candelilla. Heated to a high temperature ISCO CANDELILLA does not darken.

CERESINES (Domestic): White, Yellow, Lemon Yellow and Orange—Pure and Uniform

TAR ACID OILS— Varying strengths, 30 to 60% Phenol Coefficient of Disinfectant 3 to 6

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Merchants Bank Bldg., Indianapolis
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500 Fifth Ave., New York

Raw Material Markets

(As of June 28, 1938)

NEW YORK—The market for raw materials for the soap and sanitary chemicals industry was marked by an increase in activity in the period just closed. The prevailing tone of the market was firmer, and an expansion in business was noticeable. Much of the buying was said still to be of a conservative character, but orders for prompt shipment of various products were received more numerously, and the volume of business closed was reported to be larger than in the previous period. Sentiment was also felt to be more optimistic, both because of the increased demand and because of the upward trend in the securities and speculative commodities markets.

OILS AND FATS

Coconut Oil

The market for crude coconut oil was somewhat more active in the period just closed. Consumption was reported to have increased recently as a result of the comparatively low prices. While it has not as yet, apparently, involved important quantities, being largely a movement of moderate lots into consuming channels on contracts and transient orders, there was a disposition among sellers to assume a more favorable view of the market outlook. Prices in New York and Pacific markets were firmer. Sales were reported in New York at 3⅜c per pound and on the Pacific Coast at 3c per pound. Copra was also firmer with offerings reported as light. Quotations on crude corn oil advanced ⅛c to ¼c due to the strength shown by other commodities. Linseed oil prices declined during the period, although they were firmer towards the close. Babassu oil remained unchanged in price.

Cottonseed Oil

Southern markets for crude cottonseed oil were firm, with offerings reported as light in all sections. Some of the smaller mills were said to have closed down, and a number of the larger plants to have curtailed production. Unfavorable cotton crop prospects, and a belief that later in the season more remunerative prices will obtain are believed to account for this action on the part of producers. However, it was also reported that unsold supplies of prime crude oil are generally small.

Olive Oil

A further reduction of ⅛c per pound was registered in the price of olive oil foots during the period. Denatured oil also declined 2c per gallon. This market continued inactive, with demand limited to small quantities for the immediate requirements of consumers.

Palm Oil

The palm oil market was steadier during this period. Quotations were shaded 1/10c per pound to 2.9c for shipment. Offerings for shipment were reported as light. A concern in the Netherlands Indies was reported to have entered into large-scale palm oil production, with 5,000 acres already planted in oil palms. Quotations on palm kernel oil were unchanged during the period.

Tallow

The market for tallow was firmer and more active, with noticeable buying on the part of soap manufacturers reported. Offerings were light on the price rise. The market for tallow futures showed an upward trend at times during the period. The buying movement was reported to have begun with soap manufacturers in the west and spread eastward. In some quarters the opinion was expressed that it might continue in view of the upward trend in the securities markets. Sales were reported at 4⅞c per pound for extra delivered. The market for grease was firmer in company with tallow. Offerings were light, with quotations ⅜c per pound higher.

PERFUMING MATERIALS

Anise Oil

Prices of anise oil were lowered to a basis of 68c to 75c per pound during this period due to the keener competition among sellers and the absence of any improvement in consumer demand. It was expected, however, that a firmer situation would develop soon as a result of the war situation near Hongkong, from where the oil is exported. Cassia oil was also quoted lower at 85c to 90c per pound due to similar competitive conditions.

Lavender Oil

Competition was strong in the market for lavender oil during this period and values yielded in favor of buyers. However, more stable prices appeared to prevail toward the close, and some pickup in activity was noted.

MISCELLANEOUS

Coal Tar Chemicals

Domestic quotations for cresylic acid were adjusted effective June 20. High boiling car lots, f.o.b. sellers' works, freight equalized with producing points, were reduced to 73c per gallon, and less car lots, f.o.b. sellers' works, freight equalized with producing points, 74c per gallon. Low boiling car lots, f.o.b. sellers' works, with freight equalized, reduced to 78c per gallon, and less car lots, f.o.b. sellers' works, freight equalized, 80c per gallon. The revision in domestic cresylic acid prices was influenced mainly by unsteady conditions in the import market for the product. In sympathy with the lower quotations for cresylic acid, prices for cresol were also reduced.

KRANICH SOAPS

PURE POWDERED SOAPS

Castile, U.S.P. **Coconut, Pure** **White Neutral**
Palm, Pure **Castor, Pure**

POTASH SOAPS

Complete line of Shampoos, Shampoo Bases, Liquid Soaps, Oil Soaps, Pine Scrub and Automobile Soap.

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Raw Material Prices

(As of June 27, 1938)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	$ .05¾	$ .06¼
Acid, Boric, bbls., 99½%	ton	95.00	105.00
Cresylic, drums	gal.	.73	.74
Low boiling grade	gal.	.78	.80
Oxalic, bbls.	lb.	.10¾	.12
Adeps Lanae, hydrous, bbls.	lb.	.16	.18
Anhydrous, bbls.	lb.	.17½	.19
Alcohol, Ethyl. U. S. P., bbls.	gal.	4.04	4.16
Complete Denat., SD 1, drums, ex.	gal.	.31	.33
Alum. Potash lump	lb.	.036	.039
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls.	lb.	.08	.12½
Bentonite 1, works	ton	—	16.00
Bentonite 2, works	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.25	3.35
Borax, pd., cryst., bbls., kegs	ton	47.00	67.00
Carbon Tetrachloride, car lots	lb.	—	.05¼
L. C. L.	lb.	.05¾	.08½
Caustic, see Soda Caustic. Potash Caustic			
China Clay, filler	ton	10.00	25.00
Cresol, U.S.P., drums	lb.	.10½	.11
Creosote Oil	gal.	.13½	.14½
Feldspar (200 to 325 mesh)	ton	14.00	15.00
Formaldehyde, bbls.	lb.	.05¾	.06¼
Fullers Earth	ton	10.00	30.00
Glycerine, C. P., drums	lb.	.14¼	.14¾
Dynamite, drums	lb.	.12¾	.13¼
Saponification, drums	lb.	.09½	.09¾
Soap, lye, drums	lb.	.08½	.08¾
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	—	2.45
Mercury Bichloride, kegs.	lb.	.99	1.13
Naphthalene, ref. flakes, bbls.	lb.	.06¾	.07
Nitrobenzene (Wyrhane) drums	lb.	.07¼	.09
Paradichlorbenzene, bbls., kegs	lb.	.12½	.15½
Petrolatum, bbls. (as to color)	lb.	.02¾	.08⅛
Phenol (Carbolic Acid), drums	lb.	.14½	.15½
Pine Oil, bbls.	gal.	.52	.59
Potash, Caustic, drums	lb.	.07	—
Flake	lb.	.07¼	.07½
Potassium Carbonate, solid	lb.	.06½	.06¾
Liquid	lb.	.03	.03½
Pumice Stone, powder	100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net)—			
Grade B to H, basis 280 lbs.	bbl.	4.65	5.80
Grade K to N	bbl.	5.80	6.40
Grade WG and X	bbl.	6.40	7.55
Wood FF Spot	bbl.	5.55	6.00
Rotten Stone, pwd. bbls.	lb.	.02½	.04½
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04⅛	.04⅜
Olive Castile, bars	lb.	.26	.35
Olive Castile, powder	lb.	.30	.35
Powdered White, Neutral	lb.	.19½	.21½
Olive Oil Foot, bars, 68-70%	lb.	.09	.09½
Green, U. S. P.	lb.	.08	.09½
Tallow Chips, 88%	lb.	.08¼	.08⅜
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.08	1.35
Car lots, in bulk	100 lb.	—	.90
Soda Caustic, cont., wks., solid	100 lb.	—	2.30
Flake	100 lb.	—	2.70
Liquid, tanks	100 lb.	—	1.95
Soda Sal., bbls.	100 lb.	$1.10	$1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.07¼	.08¾
Sodium Hydrosulphite, bbls.	lb.	.16	.17
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.22	.28½
Triethanolamine	lb.	.20	.22
Trisodium Phosphate, bags, bbls.	lb.	.02	.03
Zinc Oxide, lead free	lb.	.06½	.07¾
Zinc Stearate, bbls.	lb.	.21	.23

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.06⅜	—
Castor, No. 1, bbls.	lb.	.09¾	.10½
No. 3, bbls.	lb.	.09¼	.10
Coconut (without excise tax)			
Manila, Tanks. N. Y.	lb.	.03⅜	—
Tanks, Pacific Coast, futures	lb.	.03	—
Fatty Acids	lb.	.09	.09½
Copra, bulk, coast	lb.	.0175	—
Corn, tanks, mills	lb.	.07¼	.07⅜
Fatty Acids	lb.	.06	.06½
Cottonseed, crude, tanks, mill	lb.	—	.06¾
PSY, futures	lb.	.07½	.07¾
Fatty Acids	lb.	.06¼	.06¾
Soap stock 60-62%	lb.	.02⅝	.02⅞
Soap stock 65%	lb.	.03⅝	.03⅞
Foots (50% basis)	lb.	.01⅜	.01½
Greases, choice white bbls., f.o.b.			
Chicago	lb.	.05¼	.05¾
Yellow	lb.	.04¼	.04⅜
House	lb.	.04¼	.04⅜
Lard Oil.			
Extra, bbls.	lb.	—	.08⅞
Extra, No. 1, bbls.	lb.	—	.08⅝
No. 2, bbls.	lb.	—	.08
Linseed, raw, bbls.	lb.	.0860	.0880
Tanks, raw	lb.	.0800	.0820
Boiled, 5 bbl. lots	lb.	.0940	.0960
Oleo Oil, No. 1, bbls., N. Y.	lb.	.08½	—
No. 2, bbls., N. Y.	lb.	.08	—
Olive, denatured, bbls., N. Y.	gal.	.88	.92
Foots bbls., N. Y.	lb.	.07⅞	.08
Palm, shipment	lb.	.0290	—
Palm Kernel, shipment	lb.	.0415	—
Red Oil, distilled, bbls.	lb.	.08⅜	Nom.
Saponified, bbls.	lb.	.08⅜	Nom.
Tanks	lb.	.07½	Nom.
Sesame Oil, dms.	lb.	.10¼	.10½
Soya Bean, domestic tanks, crude	lb.	.0600	.0650
Stearic Acid,			
Double pressed	lb.	.11	.12
Triple pressed, bgs.	lb.	.13¾	.14¾
Stearine, oleo, bbls.	lb.	.06½	.06¾
Tallow, special, f.o.b. plant	lb.	.04⅝	—
City, ex. loose, f.o.b. plant	lb.	.04⅞	—
Tallow oils, acidless, tanks, N. Y.	lb.	.07¾	—
Bbls., c/1 N. Y.	lb.	.08¼	—
Teaseed Oil, crude	lb.	.06½	.06¾
Whale, refined	lb.	.0870	.0890

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(As of June 27, 1938)

Essential Oils

Almond, Bitter, U.S.P.	lb.	$2.05	$2.75
Bitter, F. F. P. A.	lb.	2.00	2.50
Sweet, cans	lb.	.65	.68
Anise, cans, U.S.P.	lb.	.68	.75
Bay tins		1.35	1.50
Bergamot, coppers	lb.	3.90	4.00
Artificial	lb.	1.25	1.30
Birch Tar, rect. tins	lb.	.70	.75
Crude, tins	lb.	.16	.17
Bois de Rose, Brazilian	lb.	1.55	1.60
Cayenne	lb.	1.50	1.75
Cade, cans	lb.	.44	.45
Cajeput, native, tins	lb.	.50	.66
Calamus, tins	lb.	4.25	4.50
Camphor, Sassy, drums	lb.	.17	.18
White, drums	lb.	.17	.18
Cananga, native, tins	lb.	1.25	1.30
Rectified, tins	lb.	1.80	1.85
Caraway Seed	lb.	1.90	2.00
Cassia, Redistilled, U.S.P.	lb.	.85	.90
Cedar Leaf, tins	lb.	.75	.80
Cedar Wood, light, drums	lb.	.28	.30
Citronella, Java, drums	lb.	.38	.40
Citronella, Ceylon, drums	lb.	.35	.35½
Clove, U.S.P., tins	lb.	1.02	—
Eucalyptus, Austl., U.S.P., cans	lb.	.36	.38
Fennel, U.S.P., tins	lb.	1.10	1.15
Geranium, African, cans	lb.	3.25	4.50
Bourbon, tins	lb.	2.65	3.00
Turkish	lb.	2.05	2.25
Hemlock, tins	lb.	1.05	1.10
Lavender, U.S.P., tins	lb.	2.00	5.25
Spike, Spanish, cans	lb.	1.05	1.10
Lemon, Ital., U.S.P.	lb.	3.20	3.90
Cal.	lb.	2.50	—
Lemongrass, native, cans	lb.	.38	.40
Linaloe, Mex., cases	lb.	1.25	1.30
Nutmeg, U.S.P., tins	lb.	1.20	1.25
Orange, Sweet, W. Ind., tins	lb.	1.95	2.00
Italian cop	lb.	2.25	3.25
Distilled	lb.	—	.70
Cal.	lb.	.95	1.25
Origanum, cans, tech	lb.	.90	1.60
Palmarosa	lb.	2.05	2.25
Patchouli	lb.	3.75	8.00
Pennyroyal, dom.	lb.	1.40	1.45
Imported	lb.	1.35	1.40
Peppermint, nat., cans	lb.	2.10	2.30
Redis., U.S.P., cans	lb.	2.35	2.50
Petitgrain, S. A., tins	lb.	1.00	1.05
Pine Needle, Siberian	lb.	.95	1.00
Rose, Natural	oz.	5.25	22.50
Artificial	oz.	2.00	8.00
Rosemary, Spanish, tins	lb.	.56	.75
drums	lb.	.51	.70
Sandalwood, E. Ind., U.S.P.	lb.	4.75	4.80
Sassafras, U.S.P.	lb.	1.00	1.05
Artificial, drums	lb.	.37	.38
Spearmint, U.S.P.	lb.	1.70	1.75
Thyme, red, U.S.P.	lb.	.85	1.25
White, U.S.P.	lb.	.85	1.45
Vetivert, Bourbon	lb.	4.35	16.50
Ylang Ylang, Bourbon	lb.	3.50	6.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.05	$1.45
Amyl Cinnamic Aldehyde	lb.	2.00	2.25
Anethol	lb.	1.00	1.10
Benzaldehyde, tech.	lb.	.60	.70
U. S. P.	lb.	.85	.95
Benzyl, Acetate	lb.	.44	.49
Alcohol	lb.	.63	.68
Citral	lb.	1.40	3.10
Citronellal	lb.	.75	.80
Citronellol	lb.	1.75	1.80
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.00	4.65
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.50	.55
Eucalyptol, U. S. P.	lb.	.58	.60
Eugenol, U.S.P.	lb.	2.10	2.55
Geraniol, Domestic	lb.	.67	3.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	1.80	2.20
Hydroxycitronellal	lb.	2.00	2.50
Indol, C. P.	oz.	2.00	2.13
Ionone	lb.	1.30	4.05
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	2.10	6.30
Linalyl Acetate	lb.	1.35	2.25
Menthol	lb.	3.00	3.10
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.30
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.40	.45
Musk Ambrette	lb.	3.25	3.65
Ketone	lb.	3.40	3.80
Xylene	lb.	1.00	1.25
Phenylactaldehyde	lb.	2.25	3.50
Phenylacetic Acid, 1 lb. bot.	lb.	1.60	3.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	2.70	4.25
Rhodinol	lb.	7.60	8.60
Safrol	lb.	.50	.52
Terpineol, C. P., 1000 lb. drs.	lb.	.23	—
Cans	lb.	.25	—
Terpinyl Acetate, 25 lb. cans	lb.	.77	1.00
Thymol, U.S.P.	lb.	1.50	1.55
Vanillin, U.S.P.	lb.	2.60	2.85
Yara Yara	lb.	1.25	1.50

Insecticide Materials

Insect Powder, bbls.	lb.	.27	.28
Concentrated Extract			
5 to 1	gal.	1.80	1.90
20 to 1	gal.	6.70	6.80
30 to 1	gal.	9.85	10.00
Derris, powder—4%	lb.	.28	.36
Derris, powder—5%	lb.	.34	.42
Cube, powder—4%	lb.	.21	.26
Cube, powder—5%	lb.	.25	.30

Gums

Arabic, Amb. Sts.	lb.	.09¼	.09½
White, powdered	lb.	.12	.12½
Karaya, powdered No. 1	lb.	.14½	.23
Tragacanth, Aleppo, No. 1	lb.	2.65	2.70
Flake	lb.	.50	1.00

Waxes

Bees, white	lb.	.37	.39
African, bgs.	lb.	.21	.22½
Refined, yel.	lb.	.29	.32
Candelilla, bgs.	lb.	.14½	.15
Carnauba, No. 1	lb.	.40½	.41
No. 2 N. C.	lb.	.39½	.40
No. 3, chalky	lb.	.34½	.35
Ceresin, yellow	lb.	.08½	.11½
Paraffin ref. 125-130	lb.	.0435	.0455

AW NUTS!

I'm through trying to figure out a way to lower manufacturing costs on our products. I'm convinced our only method is to use an inexpensive domestic fatty acid. We've tried both LIQRO (crude tallol) and INDUSOIL (refined tallol) in our process and from now on we'll use them exclusively in our various blends.

Here are pine fatty acids that are produced in large quantities as a by-product of the Kraft Paper Industry. Their specifications are kept uniform through large scale production. Users of INDUSOIL and LIQRO have at their command the services of Industrial's complete technical staff. If you want inexpensive fatty acids of uniform quality specify INDUSOIL and LIQRO.

INDUSOIL

Excellent as a blend with red oil for textile soaps. Can be used with red oil for other applications including cutting oils, drawing compounds, soluble oils, pine scrubs, etc.
A blend of refined fatty acids with the following standard specifications as of May 16, 1938:

Acid Number.....170-180
Saponification No...170-185
Rosin Number 60-67
Moisture Less than. .1%
Ash Less than..... .1%
Color Not More than 70 Yellow
Color Not More than 40 Red
Using Lovibond Colorimeter Half Column
Fatty Acids (Calculated) 55-60%
Rosin Acids (Calculated) 34-38%
Sterols (Calculated) 6-10%
Specific Gravity at 60° F. .....96 to .98
Viscosity (Saybolt Univ.) at 100° F....300-400 sec.
at 210° F. 50-70 sec.
Flash Point ....350-380° F.
Fire Point .....410-430° F.
Other specifications special and must be indicated on order.

LIQRO

A blend of crude pine fatty acids with the following specifications:

Acid Number.....150-160
Rosin Acid Number. 76-82
Fatty Acids.....45 to 55%
Sterols ..... 6 to 10%
Rosin Acids .....40 to 45%

Liqro is available in large quantities both from our Covington, Va., mill and our new mill at Charleston, S. C.
Indicated uses are for asphalt emulsions, cutting oils, low-priced soaps, and many other applications where a low-price fat is a requirement.
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Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries.*

Fat Bleaching

THE purification and bleaching of oils and fats in advance of saponification is important, since it has often been demonstrated that if these processes are left to be carried out in conjunction with the salting out of soap, the results may be far from satisfactory. Suitable treatment of oils and fats precipitates dirt and other impurities much more effectively than could be done after saponification. However, this discussion will be limited to bleaching methods, which may be physical, chemical, or a combination of both.

Physical methods depend on the principle that colored impurities are adsorbed by certain pulverulent materials. Various earths are used such as American fuller's earth, Florida earth, aluminum silicate etc. Adsorbent earths should be finely ground and physically pure, in other words they should act only as adsorbents and not undergo chemical reaction with the fatty material. A maximum bleaching effect should be obtained with the addition of about one per cent of strong bleaching agent. Oil adsorption should not exceed 40 per cent at the most. Bleaching by means of adsorptive earths is usually carried out at a temperature of 80-90° C., or in some cases up to 100° C. If the work is done in a vacuum, the temperature can be lowered to 70-80° C.

Addition of bleaching earths is dependent on the material to be bleached and on the kind of earth. The bleaching is advantageously conducted in a double-walled vessel fitted with a mechanical stirrer. In this way, fats can be purified and rendered nearly anhydrous with the addition of 0.5 to 5 per cent of earth for a period of 15-20 minutes. The amount to be added and the time of mixing necessary, can be determined by a preliminary test.

The question of whether the bleaching agent should be added all at once or portionwise is still a controversial point. H. Odeen and H. D. Slosson showed recently that dehydration of fat to be bleached is unnecessary, and that better results are obtained by the addition of the total amount of bleaching earth at one time. The bleaching effect has usually taken place at the end of 15 minutes. The effect can be determined by removing a small sample of fat and pouring it through a folded filter, the brightness of the filtrate showing whether the bleaching has been satisfactory. Bleaching in a vacuum is often preferable, since this reduces oxidation, which has nothing to do with the bleaching action of the earth. Following bleaching, the mass is run through a filter press. The fat adsorbed by the earth is often dark, but can be recovered by extraction or by other methods.

Recently fatty material has been treated with activated carbons, 0.5-1 per cent of the amount of oil being used; or this treatment may be combined with that of bleaching earth. When activated carbon is used, all mechanical impuritiies should be previously removed from the fat. The bleaching is carried out at atmospheric pressure. The activated charcoal is added portionwise at time intervals of 20 minutes. The effect is usually complete after about a half hour. If bleaching earth and activated charcoal are used together, the proportion is 9 parts of earth to 1 part of charcoal.

According to French Patent No. 582.263, oil is stirred for several hours at 95° C. with bleaching earth, then treated at 245-285° C. with superheated steam under decreased pressure, followed by cooling in the presence of air. At a pressure of 25 mm. free fatty acids and volatile substances are separated. E. g., crude palm oil containing 4 per cent of free fatty acid is treated with 4 per cent of bleaching earth and stirred for two hours. It is then filtered and treated with superheated steam at 0.5 atmosphere pressure, until the content of free fatty acids decreases to 0.5 per cent.

The use of finely divided magnesium silicate or aluminum silicate in the presence of hydrogen is described in German Patent No. 388,-

193. According to U. S. Patent No. 1,111,095, animal and plant oils are bleached with a mixture of adsorptive earth and sawdust. According to another American patent cottonseed oil is bleached with a mixture of fuller's earth and an electrolyte such as ferric chloride, calcium chloride, sodium chloride, ferric sulfate, or potassium alum. The salts coagulate colloidal colored material. The proportions used were 10 per cent of fuller's earth and 1 per cent of electrolyte, based on the amount of oil, which was heated to 70° C. for an hour. According to German Patent No. 634,043, fats and oils are bleached and deacidified by treatment with zinc dust, with stirring at a temperature of 150° C. According to a patent of Merck's, fats and oils are bleached with the aid of a freshly prepared mixture of highly concentrated hydrogen peroxide and acetic anhydride. *Allgemeine Oel- und Fett-Ztg.* **35,** 138-40 (1938).

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Skin Irritation

Soaps which irritate the skin markedly are not necessarily strongly hydrolyzed. It is believed that the alkali set free by hydrolysis may not be the cause or may be only the partial cause of such skin irritation. The ease of dialyses of an aqueous soap solution through the outer epidermis is considered an important factor and the extent of dialysis has been found to run parallel to observed skin irritation. An addition of fatty alcohol sulfates to soap increases its dialyzing power. Therefore the addition of fatty alcohol sulfates to soap in shaving cream is repudiated. Welwart. *Riechstoffindustrie* **13,** 73-6 (1938).

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Water Softener

Homogeneous solid alkaline compositions are obtained by mixing an alkali hydroxide or carbonate, in the presence of water, with an alkali salt of an acid of phosphorus other than orthophosphoric acid. The compositions may be used for treating water or as cleansing agents. Chemische Fabrik Joh. A. Benckiser G.m. b.H. French Patent No. 822,954.

Perfume Fixatives

Every odor, that is, every floral and bouquet odor, requires different fixatives, depending on its characteristics. Quite often it is not desired that a great deal of odor remain after complete evaporation. In the ideal odor, as little change as possible should take place during the process of evaporation.

In classifying fixatives, there are first of all those types which are odorless or practically so. Among these are benzyl alcohol, benzyl benzoate, diethyl and dimethyl phthalate, some of the glycerine esters, etc. While most of these are practically odorless, they serve to round out and blend the odoriferous ingredients. They also assist in evaporation control as well as in the aging process.

The second group of fixatives includes ingredients which have an odor and which, when used in the proper proportions, accentuate the other odors in the mixture without changing the characteristics of the leading note. This class includes the natural and the newer synthetic musks, some of the gums and resins, ambergris, civet, and a number of the fatty aldehydes.

The third group consists of a series of products which not only act as fixatives but which also have a tendency to round out and develop bouquets. In such mixtures, the fixative is sometimes recognized and very often becomes one of the leading notes.

Other fixatives may be used which often make the mixture difficult to imitate. Even such products as vanillin, coumarin, oak moss, patchouli, vetivert, vetiverol acetate, guaiac, orris, some of the ionones, certain aldehydes and a large number of the synthetic products may be used in an odor without being easily detected. Some of these substances have a very pronounced odor. However, when they are blended in the proper proportions and with certain other ingredients, very often only an expert can detect their presence.

It can readily be seen that the fixation of perfume is a highly complicated process. The need for undertaking a broad-scale study of boiling points, evaporation rates, vapor pressures, etc., is obvious. Having available the data yielded by such a study, the perfumer will be able to predict, partially at least, the results that he will get, as is now the case in the lacquer industry. S. Isermann. *Progressive Perfumery and Cosmetics,* May 1938.

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Refining Fats

The fats are treated with an organic peroxide in the presence of a precipitant for mucilaginous matter such as dilute sulfuric, nitric or phosphoric acid, or aluminum sulfate, other neutral solid, fuller's earth or other adsorbent, at a temperature below that required to decompose the peroxide when heated alone, an excess of peroxide being used so that the purified oil contains a substantial amount of it. Blowing with superheated steam *in vacuo* may follow to hasten decolorization. When free fatty acid is also to be removed, the precipitant is preferably an alkali metal hydroxide or carbonate or a weak acid that forms a soap that is insoluble in the oil, such as boric or phosphoric acid. Vaman R. Kokatnur and Oliver S. Plantinga. British Patent No. 477.282.

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Sulfur Soap Compound

A new high-molecular weight, organic sulfur compound, classed as an "oil," is water- and alcohol-soluble, and is suitable for addition to soap to give it the usual characteristics of sulfur containing soap. It can be used in much smaller concentrations than inorganic sulfur and has no objectionable odor. For ordinary shampoos, from 7 to 12 parts are added to a liter of liquid, and for medicinal shampoos, from 12 to 20 parts to 1000 parts of liquid. In making sulfur soap, a completely neutral milled soap is used. Two per cent of the organic sulfur compound is well mixed into the soap a short time before it is pressed. Such a soap has unusual detergent action and is also therapeutically active on the skin. *Ole, Fette, Wachse, Seife, Kosmetik.* May 1938, 8-9.

Simplified Soap Process

THE preparation of non-sweating stable soap in powder and bar form according to a simplified method is described by Adolf Welter in British Patent No. 473,220. By his procedure 400 kg. of mixed fatty acids consisting of one-third each of fatty acids from peanut oil, olive oil and palm oil, are saponified without addition of liquid, with twice the amount of soda ash required for complete saponification at a temperature slightly above that necessary to melt the fatty acids. In the above case, 168 kg. of 99 per cent soda ash is used and is intimately mixed with the fatty acids at a temperature of 30-35° C. From 2-50 per cent of water, calculated from the amount of fatty acids, is added, e. g., 100 liters. After addition of perfume the cooled soap may be ground or pressed into the form of ribbons, threads, flakes or bars. The fat content of the soap in the example given amounts to 70-71 per cent.

This simplified procedure is reminiscent of a patented American method which makes use of powdered anhydrous caustic soda which is available commercially, instead of using calcined soda ash. Also a minimum amount of water is added. The method takes advantage of self-heating during saponification and much of the added water evaporates at the temperature created by the reaction. It is advantageous to mix in some soap chips in order to keep the temperature down to 100-150° C.

The whole process can be completed in a few hours. Soap made in the morning can be packed right in the plant in the afternoon. Storage under controlled conditions is unnecessary. Very little adjustment of the soap is needed, and only a small personnel for the processing.

The fats or fatty acids, or a mixture of the two, are mixed in a vessel equipped with a stirrer, with the powdered anhydrous caustic soda. The latter does not have to be absolutely water-free. Addition of water is small and is made after the saponification mixture has been heated to 40° C., or at the very most to 70° C. Somewhat more than the calculated amount of caustic soda is taken, and not less than 0.4 part of water to 1 part of caustic. With the stirrer running, the mass thickens, then increases in volume. Because of the evolution of heat it may reach a temperature of 150° C., thus driving off excess water. The swollen mass soon subsides with further stirring, and the whole saponification process is finished in a half hour. The soap can be run onto cooling rolls immediately without further drying, in order to prepare flakes, powder or bar soap. Perfume is added and the soap pressed. The resulting soap contains on the average only 7 per cent of water. A greater amount of water can be used, if preferred in order to give any proportion of water desired.

The method is very economical and offers no special difficulties. It is obvious that only very pure fats or fatty acids should be used since there is no separation of impurities as with the usual boiled process. The glycerine remains in the soap and amounts to about 8 per cent, but this offers no disadvantage. The question as to whether the soap can be filled is not covered, but there is nothing to indicate that it cannot. *W. O. Allgemeine Oel- und Fett-Ztg.* **35,** 149-50 (1938).

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Lecithin in Shampoos

Emulsified lecithin is a water-clear liquid containing about 8 per cent of lecithin. It can be diluted with water to a reasonable extent without becoming turbid, although lecithin as such is not water-soluble. Hair shampoos consisting of neutralized turkey-red oil can be improved by the addition of emulsified lecithin. It can also be added to liquid soaps of all kinds up to a proportion of about 5 per cent, with a resulting increase in cleansing and lathering power. If more than 5 per cent is used, the lathering power is decreased. The higher the soap content of the liquid soap, and the more coconut oil it contains, the more lecithin can be added without diminishing lathering power. A rule which may be followed is to add lecithin to the extent of one-fifth of the fatty acid content, or with a high proportion of coconut oil, to the extent of one-quarter or even one-third of the fatty acid content. A 15 per cent liquid soap may therefore contain 3-5 per cent of emulsified lecithin. Lecithin makes the lather thick and soft and counteracts the irritating effect of coconut oil soap.

The lecithin actually serves as a mild superfatting agent. Only 2-3 per cent should be present in shaving cream to give a copious fine foam. Cake soap may contain higher amounts; 5 per cent may be used with any soap and 10 per cent will not ordinarily injure the consistency. Josef Augustin. *Deutsche Parfümerie Ztg.* **24,** 166 (1938).

—— ♦ ——

New Use for Water Softener

The filter papers to be used in drip-coffee apparatus are treated with an alkaline water softener, such as sodium silicate plus soda ash, and with a finely divided adsorption agent such as activated carbon. Meta Schulupkothen and Carl Voigt. German Patent No. 655,783; through Chem. Abs.

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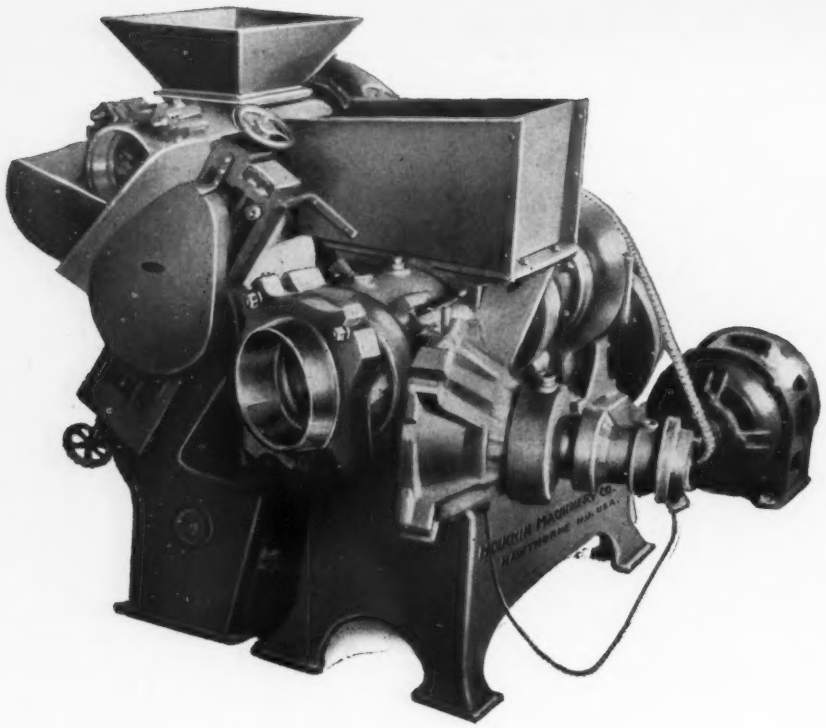
Dry-cleaning Aid

Isocyclic amines containing at least 1 aliphatic radical with more than 3 carbon atoms in the nucleus are made to react with alkylene oxides or monohalo compounds of polyhydric alcohols. The products are useful for washing textile materials, skins and feathers, and in combination with organic solvents for dry cleaning. I. C. Farbenindustrie A.-G. British Patent No. 475,867; through Chem. Abs.



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Products and Processes

Improved Rosin Soaps

The soap solution, containing not over 15 per cent of tar-like substances, should be treated with carbon dioxide at two atmospheres' pressure at a temperature not higher than room temperature, or at four atmospheres at 90° C. Under the latter conditions, the product has a low moisture content (about 20 per cent). Constant stirring or spraying of the solution during passage of the carbon dioxide is essential. The process is completed in 5-15 minutes. The product contains 75 per cent of free rosin acid, calculated on the total of free and bound acids. F. Solodkii. *J. Applied Chem.* (*U.S.S.R.*) **11,** 85-90 (1938); through Chem. Abs.

Soap Substitutes

To make aminosulfonic acids, sulfonic acids containing a CO group are condensed with ammonia or a primary amine, and the products reduced with hydrogen in the presence of a catalyst. The condensation and the reduction may be effected in one stage. Some of the products are useful as soap substitutes. I. G. Farbenind. A.-G. German Patent No. 656,427.

Formaldehyde Soap

A liquid formaldehyde soap may be prepared by the saponification of 30 parts of coconut oil with 16 parts of 50° Be. caustic potash, with the addition of 10 parts of water and 12 parts of alcohol. To the finished soap, 40 per cent formaldehyde solution is added while the soap is still warm, until the total weight is brought up to 100 parts. *Seifensieder-Ztg.* **65,** 242 (1938).

Dry-cleaning Liquid

A dry-cleaning liquid mixture suitable for use on fabrics, furs and leather is formed of benzene 53 parts, Stoddard solvent 32, denatured alcohol 11, amyl acetate 3, distilled water 8 and castile soap 2 parts, together with the reaction products of 16 parts of oleic acid, 3 of 28 per cent aqua ammonia, 0.25 part of potassium hydroxide, and small amounts of methyl alcohol, ethyl acetate and light gasoline. Robert H. Price. U. S. Patent No. 2,111,571 through Chem. Abs.

Bleaching Solution

Bleaching or sodium hypochlorite solution can be prepared cheaply from chloride of lime (bleaching powder) and soda ash. In order to avoid injury to fabric from the use of a bleach prepared by this method it is necessary to make sure that no particles of solid bleaching powder get into the bleach liquid. This is best accomplished by filtering the bleach after it has been siphoned off from residual solid. *Seifensieder-Ztg.* **65,** 202 (1938).

Aluminum Cleaner

Aluminum is a suitable metal for the making of dairy equipment but is corroded by many alkaline cleaning solutions. A solution containing 0.5-5.0 per cent of soda ash and 0.5-1.0 per cent of sodium silicate has been found to have little corrosive effect. G. Genin. *Lait* **18,** 113-30 (1938); through Chem. Abs.

Laundry Detergent

A detergent suitable for laundry use consists of a mixture soluble in water, of 10-60 per cent of mahogany sulfonates, 90-40 per cent of fatty acid soap, and a quantity of water-soluble alkali between three and five times as great as the weight of the mixture. Emery Industries, Inc. Canadian Patent No. 373,359.

Styptic Shaving Cream

Most of the compounds which possess styptic properties are unsuitable as ingredients in shaving cream. E. g., iron salts such as iron chloride, and aluminum sulfate would combine with the soap to give colored metallic soaps. Potassium alum and potassium chlorate would serve the purpose and are the main constituents of styptic pencils, but would have to be used in such small amounts in shaving cream that they would lose the property of stopping the flow of blood. It is possible that adrenaline, the hormone of the suprarenal gland, or its commercial preparation, could be incorporated in shaving cream. This has styptic properties in a millionfold dilution because of its action in contracting blood vessels. *Seifensieder-Ztg.* **65,** 262 (1938).

Cleansing Composition

A solid cleansing composition for use in aqueous solution, contains an alkali metal silicate and an amino acid or salt thereof, that contains three carbozyl groups attached to the nitrogen atom, e. g., trimethylamine-*a*, *a'*, *a"*-tricarboxylic acid. I. G. Farbenindustrie A.-G. British Patent No. 474,518.

Improving Soap

Derivatives of carbonic acid such as carbamide, guanidine or similar compounds are added to the usual basic material in making soap, simultaneously with the customary saponifying agents. Joachim Leimdörfer. Hungarian Patent No. 117,137.

Modified Soap

A washing composition consists of soap admixed with a water-soluble compound of a thiotetraphosphoric acid. Alkali metal salts of $H_6P_4O_{13}$ in which 1 or more oxygen atoms are replaced by sulfur, are used. Rumford Chemical Works. British Patent No. 476,455; through Chem. Abs.

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A new method of textile printing uses entirely new printing materials and eliminates all steaming, ageing and washing operations. As developed by Aridye Corp., Fair Lawn, N. J., subsidiary of Interchemical Corp., the process will decorate cloth of almost any type and fiber with new and unusual color effects which show marked fastness to laundering and to light.

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No. 2,117,438, Cleaning Composition, Patented May 17, 1938 by Elizabeth P. MacDonald and Naomi W. Stenglein, Saginaw, Mich. A cleaning mixture to be thereafter dissolved in water for cleaning painted or varnished surfaces consisting of 25 per cent to 50 per cent by weight of bone glue, and the balance consisting of a material selected from a class of substances consisting of borax, sodium carbonate and trisodium phosphate.

No. 2,117,796, Antiseptics, Patented May 17, 1938 by Louis J. Figg, Jr., Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester. An aqueous soap dispersion comprising caustic-soluble hardwood oil and an antiseptic phenol compound selected from the group consisting of ortho-phenyl phenol, 2:4:5-trichlorophenol, monochloro ortho-phenyl phenol, 3-chloro-4-hydroxy diphenyl, 3-bromo-4-hydroxy diphenyl, and their sodium salts, the caustic-soluble hardwood oil acting as a dispersing agent for the antiseptic phenol compound.

No. 2,118,033, Aryl Mercury Salts of Aliphatic Polycarboxylic Acids, Patented May 24, 1938 by Carl N. Andersen, Wellesley Hills, Mass., assignor to Lever Brothers Co. A phenylmercury salt of succinic acid.

No. 2,118,133, Organic Mercury Compounds, Patented May 24, 1938 by Carl N. Andersen, Watertown, Mass., assignor to Lever Brothers Co. A new organic mercury compound of the general formula $(RHg)_2.R_1$ in which R represents an aromatic structure in which none of the carbon atoms has direct linkage with any element other than hydrogen, carbon and mercury and in which R_1 represents the radical of a compound selected from the group consisting of ureids and purine bases, the RHg groups being linked to the radical by the replacement of imido hydrogen.

No. 2,118,521, Polishing Composition, Patented May 24, 1938 by John D. Pickens, Flint, Mich., assignor to E. I. du Pont de Nemours & Co., Wilmington. A liquid wax polishing composition consisting of a wax, a readily volatile solvent therefor and 1 to 6 per cent of an acid phthalate alkyl ester, the alkyl group having more than 4 carbon atoms.

No. 2,119,141, Process of Treating Fish Oils, Patented May 31, 1938 by Anderson W. Ralston and Stewart T. Bauer, Chicago, Ill., assignors to Armour and Co., Chicago. The process of treating fish oils which comprises partially hydrogenating the oil to raise its melting point and then treating the partially hydrogenated oil with an isomerizing agent to further raise the melting point without substantially decreasing the unsaturation of the partially hydrogenated oil.

No. 2,119,458, Process for Protecting Material Employing Pest-proofing Media and Material so Protected, Patented May 31, 1938 by Dalton B. Faloon, Beacon, and Roland M. Whittaker, New York, assignors to Hammond Paint & Chemical Co., Beacon, N. Y. The steps in the process of protecting material such as wool, furs and floor coverings, against attack by insects and their larvae which comprise treating the material with an aqueous solution of calcium selenate, and treating the material with an aqueous solution of an alkaline-earth fluoride.

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Proprietary Detergents

In a report covering 124 proprietary detergents, wetting agents and emulsifying agents, data are included such as the trade name, manufacturer, physical nature, chemical composition, and the properties of a one per cent aqueous solution, e. g., surface tension, interfacial tension between the solution and a highly refined mineral oil, and spreading coefficient of the solution on the mineral oil. Many of these preparations show promise for use in insecticides. H. L. Cupples. U. S. Dept. Agr., Bur. Entomol. Plant Quarantine E-426, 24 pp. April, 1938.

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Liquid Shaving Soap

Liquid shaving soap is somewhat uncommon but may be prepared by saponifying 10.5 parts of bright olein and 5.5 parts of coconut oil fatty acids with about 7.0 parts of 50° Be. caustic potash. After testing for complete saponification and excess alkalinity, the soap is brought to a fatty acid content of 15-20 per cent with distilled water. Up to 10 per cent of the water can be replaced with glycerine or with alcohol, but much more than that would diminish lathering power. Perfume is added. *Seifensieder-Ztg.* **65,** 321 (1938).

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Emulsifying and Cleaning Agent

Compounds are derived from polyhydric alcohols by esterifying one or more hydroxyl groups with an acid derived from phosphorus or boron so that only one hydroxyl group of the inorganic acid is combined, and esterifying another hydroxyl group of the alcohol with a fatty acid. These producs are sulfonated to produce emulsifying and cleaning agents. E.g., the monoglyceride of oleic acid is esterified with boric acid and sulfonated with sulfuric acid. N. V. Chemische Fabriek Servo and Meindert D. Rozenbroek. French Patent No. 821,731; through Chem. Abs.

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Washing Agent

Phthalic acid-4-sulfonic acid is treated with normal ethylcyclohexylamine to give the carboxylic acid amide, which in turn is treated with cetyl alcohol to give the mono ester. The product is a good textile washing agent. Soc. pour l'ind. chim. a Bale. Swiss Patent No. 193,075.

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Bruce Donald, 164 Dufferin Ave., Brantford, Ontario
Paul S. Menough, Chamber of Commerce Bldg., Pittsburgh, Pa.
The Adler Steel Products Co., 310 Thorpe Bldg., Minneapolis, Minn.

Liquid Tar Soap

Liquid tar soaps may be either dark- or light-colored, and may be prepared from fatty acids by a half-boiled process. Wood tar is used in making the dark quality, and is added before or after saponification. The light soap is prepared with the addition of a light-colored tar preparation dissolved in alcohol, such as anthrasol. Glycerine was formerly added but no longer is. A dark-colored soap may be made from 12 parts of coconut oil fatty acids, 4 parts of olein, 8 parts of 50°Be. caustic potash, 3 parts of wood tar and 73 parts of distilled or softened water. To make a light soap, in place of wood tar, 1-2 per cent of anthrasol dissolved in alcohol is used and is added only after saponification. A temporary turbidity disappears on standing. *Seifensieder-Ztg.* **65,** 281 (1938).

Emulsifying Soap Ingredients

Soap is made rapidly in the cold by very finely emulsifying the fatty material, treating with an accelerator composed preferably of an oxidizing substance such as sodium peroxide, adding water, and treating with concentrated alkaline lye. The very fine emulsion is maintained through all of the operations. Robert G. Gerber. French Patent No. 820,-999; through Chem. Abs.

Hospital Stain Removal

A study of methods for removal of chemical stains from hospital linens indicates the following suggested methods of treatment: Acriflavin stains are best removed by a soap and water wash, followed by treatment with a 1:9 acetic acid-alcohol mixture, soaking in a solution containing 2 ounces of potassium permanganate per gallon, and rinsing with a solution containing 2 ounces of sodium bisulfite per gallon. Balsam of Peru stains respond to acetone, xylene, chloroform and alcohol. The brown stain from tincture of benzoin is most readily removed by alcohol. With gentian-violet stains, the linen is soaked in a 1:9 acetic acid-alcohol solution, rinsed and treated with a light bleach. The most efficient silver stain remover is a hot solution containing 5 grams of mercuric chloride and 5 grams of ammonium chloride in 100 cc. of water. Arsenic stains may be removed by tincture of iodine and removal of excess iodine with sodium thiosulfate. Fresh ichthyol (chiefly ammonium sulfonate) stains are removed in the regular wash; old hardened ichthyol stains should be pre-softened by dipping in cresol solution.

Iodine stains are removed with sodium thiosulfate. Fresh mercurochrome stains are removed by bleach; older mercurochrome stains require treatment with a 2 per cent potassium permanganate solution followed by oxalic acid. Merthiolate stains are removed from animal fibers by alcohol-acetaldehyde or alcoholic hydrochloric acid mixtures, and from vegetable materials by a boiling 2 per cent alkali solution. Fresh methylene blue stains are removed by alcohol, older ones by a pyridine-osoidum bisulfite mixture. For picric acid removal, immerse in a 1:1 mixture of alcohol and 5 per cent ammonium hydroxide solution. Protosil is removed by the regular laundry process with a light hypochlorite bleach. Scarlet red is considerably reduced in the regular wash and responds to acetone. L. T. Howells. *Hospital Management* **45,** 52-3 (1938) through Chem. Abs.

Windshield Cleaner

A suitable mixture for cleaning windshields consists of solvents plus a fine abrasive. Such a cleaner may be made by dissolving together 5 parts of triethanolamine in 3 parts of industrial alcohol, 22 parts of pure glycerine, sp. g. 1.23, and 60 parts of water. This is rubbed up with 10 parts of soft tripoli. The suspension is shaken before use. *Seifensieder-Ztg.* **65,** 302 (1938).

Hand Soap Patent

A large proportion of saw dust is mixed with soap powder, pulverized pumice stone, glycerine soap and turpentine. H. Hirsch. Belgian Patent No. 422,278; through Chem. Abs.

Soap Perfumes

In blending perfume for soap, certain basic principles should be observed. Delicate odors are incompatible with strong odors, e.g., the delicate odor of jasmine should not be spoiled by combination with lavender, nor narcissus with eucalyptus, nor tuberose with cananga, etc. Perfumes may best be studied by incorporation in soap chips. The following formula is for a jasmine blend:

Ingredient	*Per Cent*
Jasmine	16
Benzyl acetate	12
Benzyl propionate	10
Benzyl butyrate	2
Benzoin infusion	10
For Orange Blossom Tone	
Neroli, synthetic	9
Methylanthranilate	16
or	
For Rose Tone	
Geraniol	6
Phyenylethyl alcohol	19
or	
For Lily Tone	
Oil of cananga	25
alpha-Amyl cinnamic alkdehyde	2
Bromostyrol	2
Geranium	12
Bois de rose	8
Methyl salicylate	1

The blend is diluted with 10 per cent of alcohol and should be matured before use. A. N. Ghosh. *Indian Soap J.* **4,** 221-4 (1938).

Foaming Agent

A washing, wetting and dispersing agent for textile processes is prepared by treating normal-ethyl-*mu*-undecylbenzimidazole with a sulfonating agent. The sodium salt of the product has strong foam forming properties. Soc. pour l'ind. chim. a Bale. Swiss Patent No. 193,222.

Alcohol Sulfates

Substantially all of the alcohols having a lesser number of carbon atoms than lauryl alcohol are removed from the mixture of alcohols produced by the catalytic hydrogenation of coconut or palm kernel oils, leaving a residue comprising essentially lauryl, myristyl, cetyl and stearyl alcohols. This residue is sulfated to produce a product which may be used for emulsifying, cleansing, etc. Heinrich Bertsch, to Am. Hyalsol Corp. U. S. Patent No. 2,114,042.

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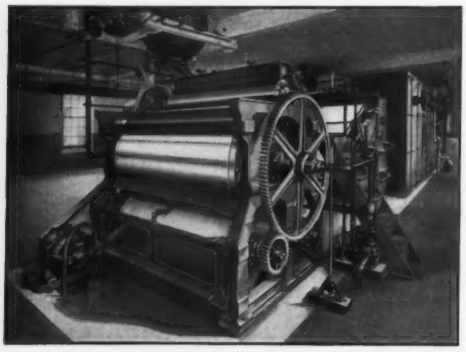

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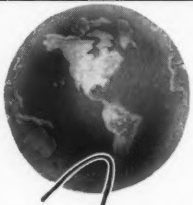

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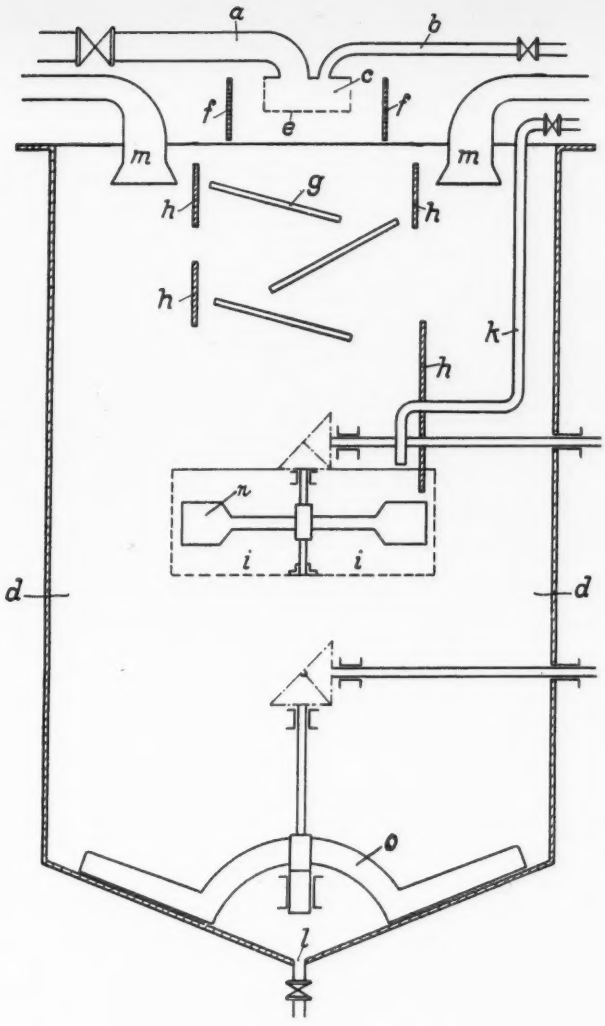

A rather recent idea originating in Germany on continuous soap making. See footnotes 40, 45.

Continuous Soap Making

(*from Page 24*)

perforated diaphragm which can present up to 100,000 orifices in a surface of 20 sq. decimeters. There are a series of interconnected vessels with diaphragms through which a gaseous medium flows.

Gillet[42] brings together in a chamber of a T construction two jets of liquids opposed to one another, making use of the violence of contact. Each liquid is pulverized in a current of steam which may be superheated.

In a Norwegian patent to H. W. Schou[43] cocofat and the like 100 parts and 20-30 parts of 20-50 per cent lye are passed into an emulsifier to form soap and the emulsion is then artificially cooled upon a cooling drum.

Swedish[44] patent No. 64,257 saponifies and produces a powder in one operation. Oil and NaOH solution are blown into a container in finely divided form by compressed air.

In the periodicals there is only little of significance. There is a very brief statement of a suggestion by Welter[46] that the preliminary saponification be conducted in open kettles, followed by finishing in smaller autoclaves or still better by pumping the soap through coils of pipe, heated to 150°.

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22. U. S. No. 291,329 of 1-1-1884 to Gibbs.
23. U. S. No. 362,856 of 5-10-1887 to Riviere.
24. U. S. No. 711,492 of 10-21-02 to Gottschalk.
25. U. S. No. 771,141 of 9-27-04 to Gesner.
26. U. S. No. 904,520 of 11-24-08 to Ellis.
27. U. S. No. 1,153,625 of 9-14-15 to Kayser.
28. U. S. No. 1,473,396 of 11-6-23 to Bodman.
29. U. S. No. 1,722,687 of 7-30-29 to Spensley.
    (Same as British No. 201,968)
30. U. S. No. 1,874,388 of 8-30-1932 to Travis.
31. U. S. No. 1,904,021 of 4-18-33 to Weber.
    (Same as French No. 678,363)
32. U. S. No. 1,912,001 of 5-30-33 to Lauer.
33. U. S. No. 1,965,566 of 7-3-34 to Beck.
34. U. S. No. 2,019,775 to Clayton and Burns.
35. U. S. Re. No. 19,456 of 2-12-35 to Clayton, Kerrick and Stadt.
36. U. S. No. 2,037,004 of 4-14-36 to Burns.
37. U. S. No. 2,037,006 of 4-14-36 to Clayton.
38. U. S. No. 2,085,691 of 6-29-37 to Brown.

39. U. S. No. 2,084,446 of 6-22-37 to Lorenz.
40. German patent to Katt—see No. 45.
41. French No. 374,179 of 4-11-1907 to Riviere.
42. French No. 748,271 of 4-10-1933 to Gillet.
43. Norwegian No. 44,756 of 1928 to H. W. Schon.
44. Swedish No. 64,257 of 2-7-23 of the Forbundet Forening.
45. Masloboino Zhirovoe Delo 12, 298-9 (1936).
46. Z. deut Oel-Fett. Ind. 45, 685-6 (1925).

Toilet Soaps

(*from Page* 31)

"certificate of guarantee" that the inner wrapping commonly bears.

Unwrapped soap must be carefully protected from dust. Many of the dyestuffs used in soap manufacture are exceedingly light and can float a considerable distance. If they are not weighed out and dissolved in a place well apart from the toilet department proper, small particles of dyestuff may settle on the surface of finished tablets, and produce an outbreak of colored spots which spoils the soap completely. One such outbreak in the writer's experience was finally traced to the sharpening of indelible pencils containing aniline dye in the vicinity of storage racks.

Meaning of pH

(*from Page* 27)

weight. McBain gives the following figures for a concentration of 0.01 equivalent of soap per kilogram of water. This concentration corresponds to 0.2-0.3 per cent. Soap as ordinarily used, such as in laundry practice, will have a concentration of 0.1-0.15 per cent. Therefore the degree of hydrolysis will follow the same relative values as above and sodium stearate will have a much higher pH than sodium laurate. The extent of hydrolysis for potassium and sodium soaps is practically identical.

Soap	*Length of Chain*	*Hydrolysis*
Sodium laurate	C_{12}	2.5%
Sodium myristate	C_{14}	4.5
Sodium palmitate	C_{16}	7.5
Sodium oleate	C_{18}	8.6
Sodium stearate	C_{18}	13.0

The reason that soap hydrolyzes to such a large extent, for example so much more than sodium acetate, is because insoluble acid soap is formed. The insolubility of one of the products of hydrolysis shifts the equilibrium, with the formation of a higher concentration of hydroxyl ion.

As the concentration of soap is increased, it becomes more colloidal with an increasing proportion of ionic micelles or clumping together of molecules and ions. Hydrolysis decreases with an increase in colloidality and the pH curve passes through a maximum and then drops; the more concentrated the solution, the less alkaline, above a certain value.

The pH values for soap solutions are therefore seen to depend on composition as well as on other factors. For a 0.25 per cent solution at 20° C. of a sodium soap of soybean oil fatty acids, a pH of 9.2 has been determined; for the sodium soap of coconut oil fatty acids, a pH of 9.6[6]. A value of 10.2 for a 0.1 per cent solution of ordinary tallow soap at room temperature has been reported[7]. Janistyn[8] gives the general range of 9.8-10.4 for dilute solutions of toilet soap as used in the home. He gives pH 9.3-9.6 for the lather and explains the lower alkalinity of lather as resulting from the acidity of the skin. Probably carbon dioxide from the air has something to do with it.

[6] W. Bleyberg and H. Lettner, *Chem. Umschau Fette, Oele, Wachse, Harze* 39, 241-53 (1932).
[7] C. A. Tyler, *Soap*, p. 22, August 1934.
[8] H. Janistyn. *Seifensieder-Ztg.* 58, 776-7, 791-2 (1931).

(This is the first of a series of articles on the practical applications of pH. The second article on the determination of pH will appear in the next issue.—Editor.)

Foam Bath Products

The ingredients for making a strongly foaming bath mixture consist of two separately packed items: 1. A bottle containing 40-50 grams of saponin extract. 2. A bag or other receptable containing a mixture of 330 grams of anhydrous alum and 270 grams of sodium bicarbonate. The idea of the second package is to combine sodium bicarbonate with an acid salt such as alum, sodium bisulfate, aluminum sulfate or other similar compound, so that when the two dissolve in water they will react to liberate carbon dioxide. The saponin will form a strong stable foam as the carbon dioxide is produced. Directions to accompany these materials should instruct the user to fill the bathtub with warm water, dissolve in this the foam-bath extract, stir and then add the salt mixture until the tub is filled with foam. The foam is easily destroyed and removed from the body with soap solution and the usual rinsing.

A foam bath made by the evolution of oxygen can be prepared by mixing sodium perborate in the proportion of 300 grams with a catalyst consisting of 6 grams of manganic sulfate plus 9 grams of potassium bitartrate. A disadvantage of this is that the manganic compound makes the foam brown. Horse liver extract or an enzyme such as peroxidase can be used as catalyst to give a colorless foam. The two products are packed separately and used as described above. Julius Hübscher. *Deutsche Parfümerie-Ztg.* **24,** 129-131 (1938).

Methyl Hexalin Odor

The odor of methyl hexalin is well known and is a difficult odor to cover up. When it is used in soap, if it is not too concentrated the odor can be counteracted with that from clove oil, eucalyptus oil or sometimes amyl acetate. *Seifensieder-Ztg.* **65,** 221 (1938).

Tea Seed Oil

Seeds of *Thea sinensis* contain 16-35 per cent of oil. Kernels of the seeds of *T. japonica* and *T. sasanqua* contain up to 60 per ment of oil. The physical and chemical properties of these oils are practically indistinguishable from each other or from those of olive oli, except that tea seed oil appears to contain slightly more oleic acid. No method has yet been found that will detect adulteration of olive oil with tea seed oil. C. van de Koppel and P. A. Rowaan. *Indische Mercuur* **61,** 167-9 (1938); through Chem. Abs.

Sanitary Products SECTION

A Section of "SOAP" dealing with

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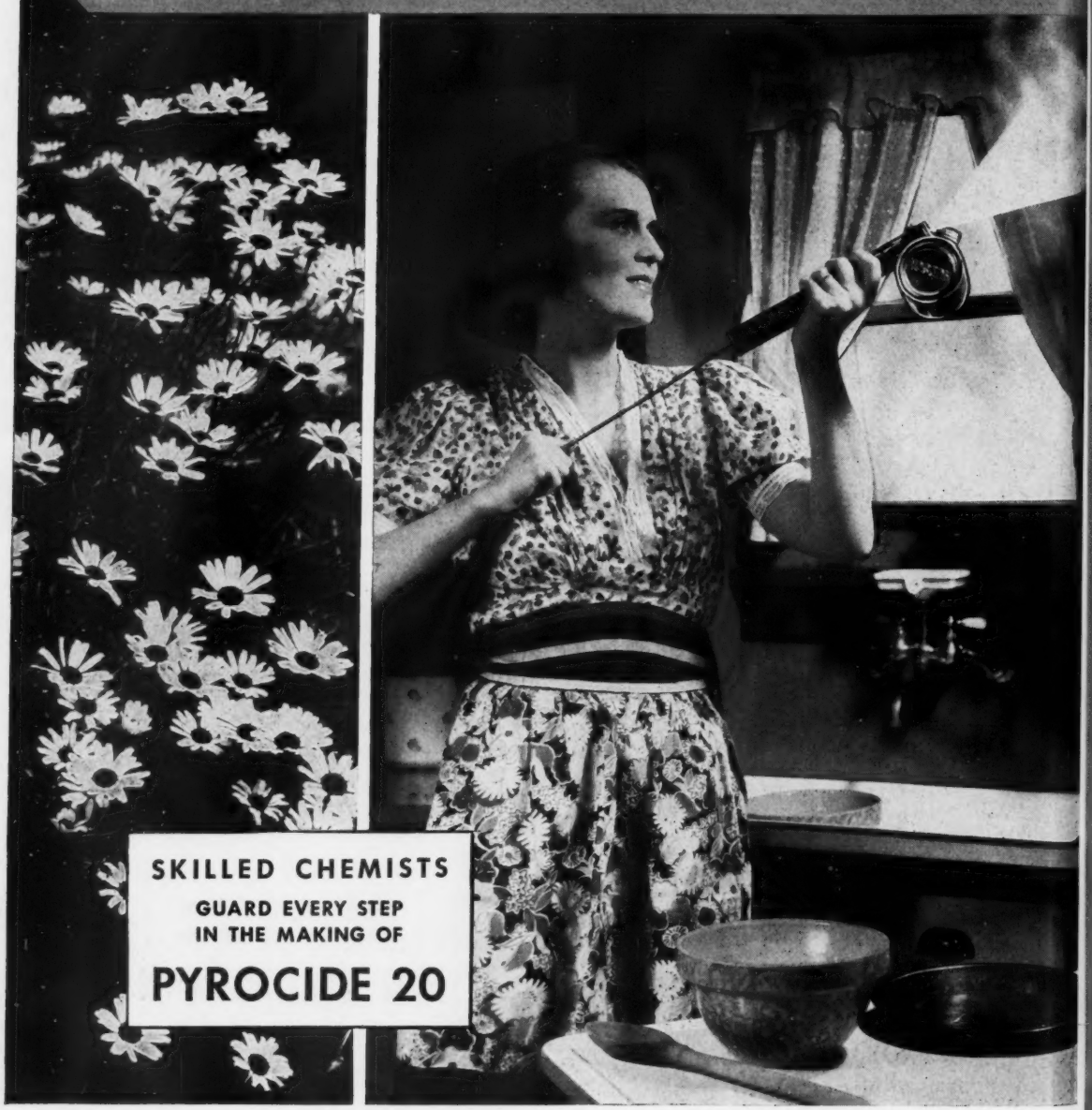

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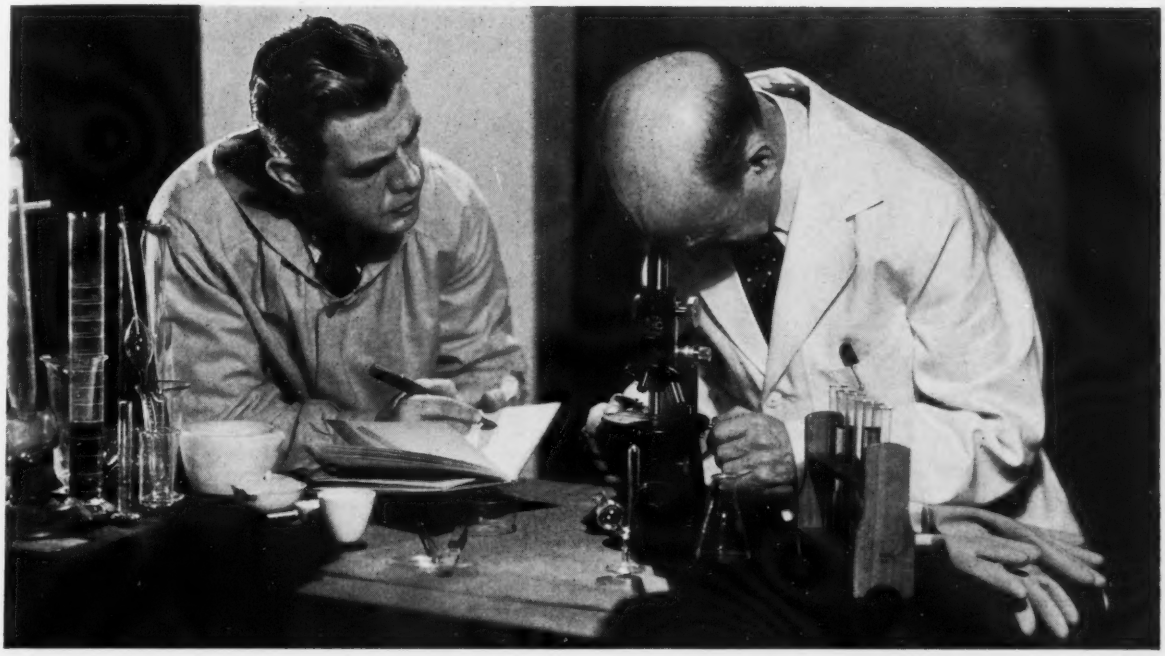

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Sanitary Products

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

THAT the 24th annual summer meeting of the National Association of Insecticide & Disinfectant Manufacturers held recently at Lake Wawasee, Indiana, was one of the most successful gatherings of this association ever to be held, was very generally admitted at the close of the meeting. Not only were its sessions well attended, but the nature of the leadership and the discussions reflected a live, virile spirit. New life, including the formulation of broader plans for the future, was injected into the sanitary specialties division of the membership, including a special meeting, which it is believed will bring heightened activity by this group. All of this emphasizes the fact that no progressive firm in the industry, large or small, should longer remain outside of membership in this Association.

AS A result of the decision of Judge Geiger in the U. S. Federal Court, Milwaukee District, last month, the validity of the broad Dennis patent covering use of cube root both in powdered and extract form has been sustained. This means to the insecticide industry that users of cube face individual suits for infringement if they continue to use this material, unless they can work out satisfactory licensing arrangements to operate under the Dennis patent. Whether or not an appeal will be filed from the decision of Judge Geiger is not at the moment certain, but it seems unlikely. This leaves the matter of defense right in the laps of individual insecticide manufacturers, and with an unappealed adverse decision facing them, their prospects for successful contest of these suits could not be considered bright. There is some measure of cheer, however, in the report that the royalty asked for operation under the patent will be a modest one.

TERMITE bites man! This is news, even if entomologists seem to agree that termites much prefer a juicy morsel of wood to a bite of human flesh. At any rate, it seems that a construction superintendent on a building repair job filed a claim for compensation recently as a result of injuries received from a termite bite. In case any others are attacked by termites, we suggest that they show no compunction about biting right back. When a man bites a termite, we suppose this will be real news. And knowing that termites are fond of wood, maybe some of our workmen should protect themselves at all times by wearing hats.

WHO is entitled to the quantity discount prices that bulk and private brand manufacturers of sanitary products extend to their clientele? A sharp line is difficult to draw, perhaps, but certainly it is a cut or two above the buyer who comes in for two dozen pints of insecticide or half a dozen cans of floor wax. It is only a matter of sound business sense that quantity discounts should not be extended to the buyer who customarily makes his purchases in consumer quantities.

Insecticide—Disinfectant Assn.

LEGISLATION, marketing, politics and business, standards and specifications, new testing methods, ills of the industry, and a host of other subjects came in for discussion at the 24th annual summer meeting of the National Association of Insecticide & Disinfectant Manufacturers held on June 13, 14 and 15 at the Spink-Wawasee, Lake Wawasee, Indiana. Some 200 representatives of American manufacturers of insecticide, disinfectants, and allied sanitary products attended the meeting. J. L. Brenn, president of the Huntington Laboratories, Huntington, Ind., and president of the Association, was in the chair during most of the meeting sessions, assisted by W. J. Zick of Stanco, Inc., New York, first vice-president. In his annual address, published elsewhere in this issue, Mr. Brenn urged American business men to get into politics as the only means of receiving necessary legislative attention to their problems.

Other important speakers included Henry B. Abbett, purchasing agent for Purdue University, giving his views on the insecticide and disinfectant industry from the buying angle; Prof. J. J. Davis also of Purdue University, who spoke on the "Future of Household Insecticides of the Farm." outlining the market and its possibilities; Dr. E. M. Searls of the University of Wisconsin on "Studies of the Cattle Fly Spray Problem"; A. G. Burks, of the purchasing division of Indiana University, on "Sales Representation by Industry." Dr. F. L. Campbell and W. N. Woodbury who are conducting the Association fellowship at Ohio State University presented a report of their work and findings on tests against crawling insects to date. The fellowship has been renewed by the Association for another year.

Carl W. Dipman, editor of "Progressive Grocer," presented an interesting talk on "Marketing and Trends in the Grocery Trade." He outlined the changes in the type of retail grocery outlets over recent years, indicating a trend away from chain stores toward the individually owned retail store. He laid this in part to adverse legislation and in part to economic conditions which favored the return of the small grocer. He also discussed marketing methods to the grocery trade, mentioning among other things the inadvisability of using premiums which are diffi-

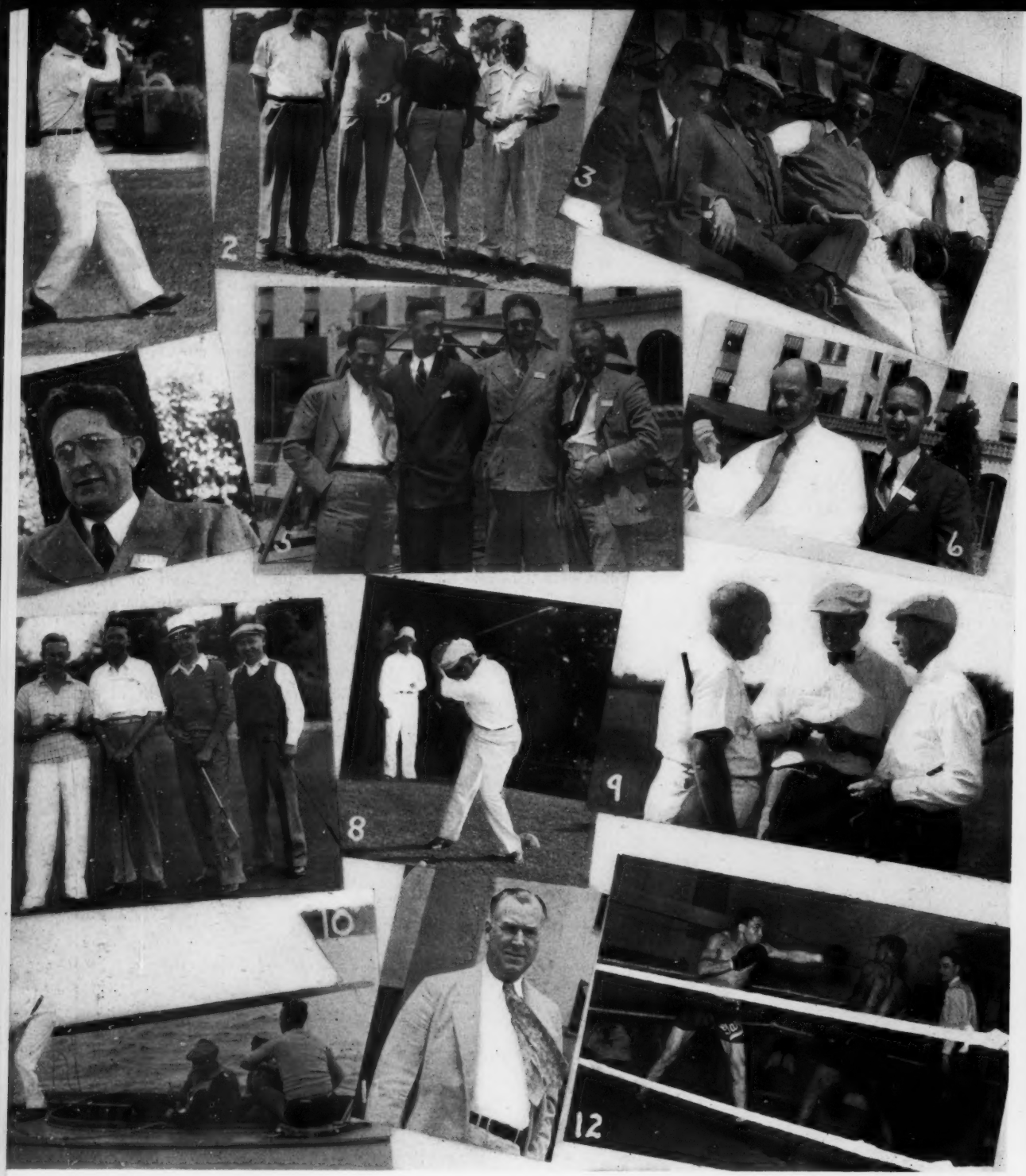
Reports on 24th Summer Meeting

cult for the retailer to handle, such as large bulky items. He recommended premiums of the type which can be attached to the package of the product itself. He also stated that retailers are becoming surfeited with too numerous premium offers by manufacturers and that it might be well to study the field carefully before going ahead with new premium ideas.

Dr. Alfred Weed of John Powell & Co. in reporting for the Insecticide Scientific Committee announced that the newly revised Peet-Grady Method for testing spray insecticides would not be released for general use for some time owing to the committee's belief that it should be tried out more carefully by members before general adoption. H. W. Hamilton of the White Tar Co. in reporting for the Disinfectant Marketing Committee, mentioned among other things the increase in off-grade disinfectants on the market, especially in the pine oil class.

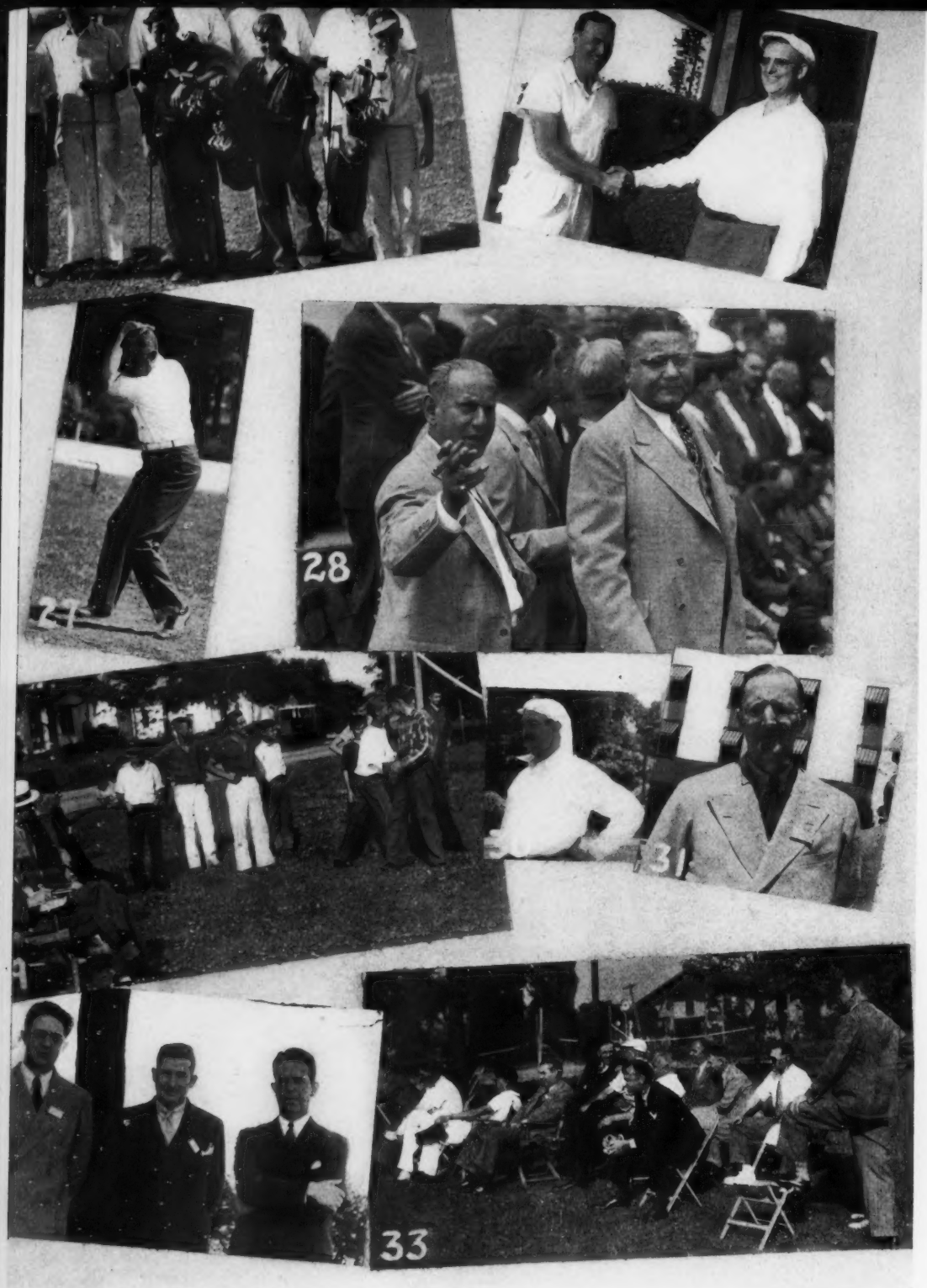
Dr. George W. Hoover, former chief of Drug Control of the U. S. Department of Agriculture spoke on legislative developments affecting the marketing of antiseptics, germicides, and disinfectants and pointed out the numerous laws under which manufacturers in this group will be operating for the next year or two. He went into the new drug law and the Wheeler-Lea Act and warned manufacturers of the numerous complications which these involve in manufacture, advertising and marketing, and apparent conflicts between the various laws now in force. He stated that manufacturers who watched their step very carefully and who familiarized themselves with the new laws, would not run into as much trouble as they have been anticipating. Much will depend on the manner in which the laws are enforced, and on court decisions which will probably be rendered in connection with the newer legislation over the next year or two.

Committees who served in connection with the convention included the General Convention Committee with John Powell of John Powell & Co., chairman; in charge of program, W. J. Zick of Stanco, Inc.; in charge of arrangements, J. L. Brenn, the president; in charge of entertainment, R. S. Solinsky of the National Can Co.; in charge of registration, D. W. Lynch of John Powell



AT the 24th annual summer meeting of the Insecticide-Disinfectant group at Lake Wawasee, Indiana, June 13, 14, 15. 1. President Brenn and his latest perfected golf form. 2. Kelly of Sonneborn, Woods of Williams Sealing, Haack of Sun Oil, Lowenstein of Collins. 3. Trevisan of American Can, Rauch of Penick, Alwyn of American Can, and Badertscher of McCormick. 4. Joe Armstrong of Rex Research. 5. Murphy and Dumas of Rohm & Haas, Armstrong of Rex, Noble of Penick. 6. Badertscher and Curlett of McCormick & Co. 7. Hogg of Hercules, Jack Varley of Baird & McGuire, Bill Pollnow of Vestal, and Pat Moran of Wilson & Bennett. 8. Golf form a la Harold Thomas of Shell,—a perfect shot. 9. Gothard of Sinclair, Ahles of Powell, and Swanson of Sinclair. 10. The "Pyrethrin II" and its crew,—Bevernick raises the jib, Skipper Dorland on the rear deck, Adjustable Ballast Al Pillet looking our way. 11. Doc Reddish of Lambert. 12. Action during the show,—two middle-weights mix it up.

13. Stern view of the Insecticides' star first baseman, none other than Nels Gothard in action on the ball field. 14. Flanagan of Federal Varnish, Van Dyne and Fabry of American Disinfecting, and Solinsky of National Can. 15. Zowie! What form! The charge of the light brigade? It looks like Niagara's Bill Weed, but we can't be sure. 16. The president watches the ball game in comfort. 17. The horse - shoe pitching double champs, Newell and George Arehart of Universal Metal,—the former the individual champ, meeting and beating all-comers. 18. Hanley of Felton Chemical. 19. DeLacy of National Can, Jones of McCormick, Alwyn and Trevisan of American Can. 20. Huck swings it! Frank Huckins of Sinclair. 21. Andree and Leath (1938 golf champ) of Sinclair, Thomas of Shell and MacNair. 22. The boys sun themselves on the promenade. 23. George Simmonds of U. S. Sanitary. 24. Dudley Lum tells one while the gang eats.



A FEW more shots at the NAIDM meeting. 25. Powell, Ahles, Swanson, and Gothard with caddies. 26. Doc Thomssen of J. R. Watkins and Dudley Lum, Givaudan's Chicago firebrand (past tense) put on a greeting act for the camera man. 27. Mike Lemmermeyer of Aromatic Products shows us what a golf swing should look like. Mike was also a part-time sailor, a member of the crew of the Pyrethrin II. 28. Leo Lowenstein tells Bob Solinsky how a picture should not be taken. 29. A part of the Wally Thomas subsidized gallery at the ball game, caddies from the golf club who cheered the ball players for pay. 30. Sam Bell of Pittsburgh goes native, wearing the latest in Sahara Desert sun hats. 31. Wally Thomas, in person. He swam Lake Wawasee at 6:30 A.M. one morning. 32. Joe Armstrong with Edgar Brand of Sonneborn and John "Sunshine" Powell. 33. Another view of a part of the gallery at the ball game which the "Insects" won 3 to 1.

& Co. The resolutions committee was composed of R. O. Cowin of Standard Oil Co. of Ohio, chairman, and C. S. VanDyne of American Disinfecting Co., C. W. Murray of Baldwin Laboratories, and George A. McLaughlin of McLaughlin, Gormley, King Co.

A special meeting of all manufacturers of a general line of sanitary supplies was held during the convention on Tuesday evening, June 14, to discuss their particular problems. Melvin Fuld of Fuld Brothers, Baltimore, chairman of the sanitary specialties committee of the Association, presided at the meeting which was attended by thirty representatives of manufacturers in the field. The main object of the meeting was to encourage more attention by the Association to sanitary specialties and to encourage a wider membership among manufacturers in this field, and also to consider the subject of extending Association specifications throughout the sanitary line.

A special committee headed by W. J. Zick, first vice-president, which has been engaged in rewriting and revising the by-laws of the Association for the past six months, rendered its report at the meeting and the by-law revisions were adopted as recommended. Copies of the revised by-laws will be available to the membership in the near future.

Sports Program

THE most exciting event on the sports program at the Wawasee meeting was a baseball game between the "Disinfectant Demons" and the "Insecticide Bearcats." It was a regulation game of soft ball which the Insecticides won in seven innings by a score of 3 to 1. Stars for the Insecticides were Les Jones of McCormick and Harold King of Prentiss. Fabry of American Disinfecting was the Disinfectants' star first baseman and the only home run hitter of the game. The game was surprisingly free of errors, which plus fine pitching held down the score. Fred Hogg of Hercules pitched the entire game for the Demons while Peterson and King shared the work for the Bearcats. J. L. Brenn, president of the Association, was nonplaying captain and general manager of the Disinfectants, while First Vice-president Bill Zick acted in the same capacity for the Insecticides. The lineup follows:

INSECTICIDES		DISINFECTANTS
Powell	C	F. Thompson
Peterson	P	Hogg
Jones	1b	Fabry
Newman	2b	Varley
Curlett	3b	MacNair
Alwyn	ss	W. Pollnow
Reddish	2-ss	A. Weed
Benedict	lf	Hadfield
King	cf	Baird
Bower	rf	Muller

H. King pitching fourth inning in place of Peterson, H. Thomas going in at left field, and Lawrence in center field. Gothard went in at first base for Jones in fifth, Jones going to 2nd-shortstop in place of Weed. Lemmermeyer replaced Reddish in the fourth and Cooper went in for Hadfield. Lum replaced Baird in the fifth inning, Lang going in to replace MacNair, and McGee in place of Varley. The score:

Bearcats	0 1 2 0 0 0 0	3
Demons	0 0 0 1 0 0 0	1

During the course of the game which was watched by most of those attending the convention, Wallace Thomas appeared with about 25 caddies from the golf club whom he lined up along the first-base line and who very effectively heckled the players, especially the catchers, Thompson and Powell. It is reported that Mr. Thomas subsidized this large gallery at ten cents each to razz the Disinfectants so that the Insecticides could win more easily, but the wires became crossed and the caddy-gallery applied their razzes in all directions.

The annual golf tournament was held Monday afternoon, June 13 on the Wawasee course. Low gross prize was won by L. W. Leath of the Sinclair Refining Co. with a 76. Charles Furst of Furst-McNess Co. and Thomas Morgan of MacNair-Dorland Co. were tied for second with 79. There were numerous prizes distributed to other golfers in the kickers and handicap classes, the entertainment committee headed by Robert S. Solinsky of National Can Co. giving out a total of some sixty awards for golf alone not counting the other competitions. Mr. Solinsky announced that the large number of prizes was made possible by donations to the prize fund by the following member firms:

Allaire, Woodward & Co.; American Can Co.; van Ameringen-Haebler, Inc.; Aromatic Products Co.; S. H. Bell Co.; Breuer Electric Mfg. Co.; Continental Can Co.; Dow Chemical Co.; P. R. Dreyer, Inc.; Federal Varnish Co.; Fritzsche Bros. Inc.; Givaudan - Delawanna, Inc.; Hercules Powder Co.; H. D. Hudson Co.; MacNair-Dorland Co.; Magnus, Mabee & Reynard, Inc.; McLaughlin Gormley King Co.; National Can Corp.; Niagara Alkali Co.; Owens-Illinois Can Co.; Owens-Illinois Glass Co.; S. B. Penick & Co.; John Powell & Co.; R. J. Prentiss & Co.; Rohm & Haas Co.; L. Sonneborn Sons, Inc.; Spink-Wawasee Hotel; Standard Container Co.; Strahl & Pitsch Co.; T. F. Washburn Co.; Williams Sealing Corp.; Wilson & Bennett Mfg. Co.

A novelty this year was a horseshoe pitching tournament in which some 32 men and boys who hailed from "down on the farm" a few years back, participated. This branch of the sports program was managed by Wallace Thomas of Gulf Refining. After an elimination tournament in both singles and doubles, all the horseshoe pitching glory went to two men, both from the same company. Frank M. Newell and George Arehart of the Universal Metal Products Co. fought it out in the singles and Newell won the final by a whisker. Teamed together in the doubles, they romped through to win in a slow waltz, completely outclassing the field. There were even rumors about that Wally Thomas had imported a couple of pros from some blacksmith shop in

(*Turn to Page* 127)

Other papers and addresses, presented at the 24th annual summer meeting of the National Assn. of Insecticide & Disinfectant Manufacturers, and not appearing in this issue of SOAP, will be published in the next issue.—

The Editors.

BUSINESS AND POLITICS— Can They Be Mixed?

By J. L. Brenn*
Huntington Laboratories

AT OUR past conventions it has been the custom to have a representative of the local Chamber of Commerce, the Mayor's office or some other local dignitary extend us a welcome. This time I felt it most appropriate to do this job myself because I consider your presence here in Indiana a personal honor and tribute to myself. I know of no other resident or official of Indiana whose words of welcome could be more sincere and come from as deep down in the heart as mine, because of this.

I have chosen the topic of business and politics to bring before you at this opening convention session. Government and politics are the same thing, and I don't need to dwell very much on the extent to which government today affects business activities. This is no abstract situation but a very vital and real one which plays its part in your job and mine. The sooner we realize the truth and importance of this situation, and get down to the job of doing something about it, the better off we will be.

There is no power in these United States greater than the power we business people have right in our own hands, but to accomplish anything for our own or the common good it must be put to effective use. Just as electrical power must be harnessed to an electric motor to make it do something, so we must learn to harness the political power we already possess to a productive plan.

It is sad but true that with all our trade associations, Chambers of Commerce, manufacturers' associations and bankers' associations, business today is still the most disorganized group in our entire body politic. There are too many individualists among us. Too many of us also look upon politics as something beneath us. Unless and until more of us recognize the importance of solid organization, and get down to the job of looking after our political interests in an efficient way, we are going to go along getting it in the neck politically just as we have quite regularly in recent years.

The time has come when we business people must cast aside that attitude so many of us have had towards politics. It is no longer a case of being a Democrat or Republican . . . for as a matter of fact Democrats are no longer democrats and Republicans are not republicans. Well organized minorities in labor and farming have made their voices heard so loudly in our legislative halls that they have been able to obtain almost any kind of laws they asked for,—even laws which have eventually proven most disastrous for laborers and farmers themselves.

Industry, commerce and banking have suffered acutely in recent years because these groups of business people have never been well combined. Legislation adverse to business has been enacted solely because business is the most disorganized entity in our political set-up. Too many of we business people are afraid of offending someone if we take a political stand one way or another. Through fear of loss of business, we go on letting the politician tell us, instead of our telling him what to do.

Indiana is supposed to be an agricultural state, although less than one-fourth of our people secure their livelihood from the farm. Still, when the State Legislature goes into session every other year, there is much shedding of crocodile tears over the lot of the poor farmer, and much talk of his need of laws favoring his vocation. All this may be traced to the fact that the Farm Federation is a closely knit organization, properly represented in the state capital. When it isn't the farmer getting his at the public feed bag, it is the poor laboring man whose interests must be looked after because he too votes and has an organization. In the process of protecting the farmer and laboring man, the politician frequently creates a milking process which saps the life blood of business institutions and in the end impoverishes the farmer and laboring man as well.

This vicious circle must be stopped if our democracy is to survive. It can be stopped only if we get down to the job of politics without party labels and employ the same energy in politics that we apply in the operation of our respective businesses.

Politics does not begin with the President or with Congress. It ends there, but it begins right in your own precinct with your precinct committeemen and the delegates to

* Address of president, Natl. Assn. of Insecticide & Disinfectant Mfrs., before 24th mid-year meeting, Lake Wawasee, Ind., June 13, 1938.

W. J. Zick, association vice-president, and J. L. Brenn, president and host to the convention at Lake Wawasee, Ind., relax in an informal pose at the soft-ball game.

your state convention. Yet I'll venture to say there are not a half dozen men in this room who could tell me the name of the precinct committeeman in their own home precinct. You can bet your bottom dollar the politician knows, and that's why we have such political machines as Tammany Hall in New York, Pendergrast in Missouri, Kelly-Nash in Chicago, and many more less publicized ones, equally as efficient and vicious, in other sections of the country.

When John L. Lewis started to build up his C. I. O. organization, he immediately made plans to enter upon the political stage. The large sums of money his organization contributed to political campaigns were only a small part of his political plan. Much more effective work was done and is being done by his many lieutenants in securing the election of various state and local officials.

Contrast that well-planned campaign with the usual attitude of the business man. Most of us wait until an election is over before we awaken to the fact that politics is important to our welfare,—and then it is too late. The Congressmen to whom we send all those telegrams and letters are well aware of the fact that there is little we will do about their re-election when election day rolls around, regardless of what they do for or against us.

Insofar as our own particular business is concerned, it certainly should be quite clear to all of us that for the past several years our Association money and energies have been spent almost entirely on legislative matters. We have been forced continuously on the defensive instead of being able to pursue plans for improving our products or businesses. The same condition holds true with many another trade organization like ours.

We do not need nor want any special legislation favoring our industry in particular or business in general. What we do need most is to be left alone and to have taxes reduced. We can't reduce taxes by constantly spending more of the taxpayers' money. And here, too, we must never forget the extent to which our local and state taxes cut into every dollar we take in.

As an amateur politician, the best advice I can give you is: "Get yourself into politics in a serious way, but get into it at the bottom. Clean up your own front yard first before you consider getting over into your neighbor's yard. See that your own precinct, ward, city, county and state have honor re-established in politics and that the right sort of honest men are selected to fill these political offices . . . then the job of picking and electing the right kind of Congressmen, Senators and Presidents will be substantially improved."

It is distinctly regrettable that in this, the world's greatest democracy, so few respected men want to offer themselves as candidates for public office. As a result, we have many politicians but few statesmen. There is many a statesman warming a swivel chair in a business office or factory whose services to the people would be immensely valuable, if only you could get the political situation cleaned up so that he would be willing to be a candidate.

You must look at this business of politics as an important,—yes, a vital job for you to perform. It should be just as important to you as it is to the politician. When the politician gets some poor fellow a job as a W.P.A. foreman at seventy-five dollars per month, he figures that he has that fellow, his family and his friends sewed up body and soul to vote just as the politician dictates. When we give the same man a job in our plant or office, a job that is much more permanent and satisfactory, and perhaps pays a better wage, too, we are too proud to ask him to vote as we think best. The time has come when we must re-establish friendliness and cooperation between our employees and ourselves and educate them as to what political steps will best insure the permanency and success of our businesses and their jobs. When we do, the politicians will know that we control enough votes to accomplish what we set out to accomplish. In the final analysis votes are the only thing the politician understands and appreciates.

. . . theater market

for SANITARY CHEMICALS

MOVIE goers are a lot of swine! That is the blunt statement of the manager in charge of maintaining sanitary conditions in one of New York's largest movie cathedrals. To hear him tell it, the world (at least that portion which goes to the movies, and that just about takes in everybody) is made up of filthy people and hoodlums who besmirch, deface, and pillage other people's property,—meaning movie theaters.

Such opinion as that must be a little warped, one thinks. Then we visit other theaters and talk to other managers about their cleanliness and sanitation problems, and find that they are of the same mind. Mention the public,—and, of course, you can't help but mention the public for the whole subject of cleanliness and sanitation revolves about it,—and you never saw or heard such gnashing of teeth and tearing of hair. Of course, care is taken that none of these vituperative remarks ever reaches the customer and drives him from the box office. That would never do, for customers are bread and butter. Feelings are held in check,—and that is what makes it so hard for the maintenance manager. He can never let himself go and tell the customers what he thinks they are. All he can do is swear under his breath and pray for an occasional sympathetic listener to come along,—like SOAP'S reporter, for example. Then he can let off excess steam.

"Listen, buddy," said the manager in charge of maintaining cleanliness and sanitation in a New York movie theater seating 6,000 and catering to about 28,000 daily, "do you want to know our biggest headache in keeping this place clean? Come with me." Together we left his office and entered the theater's foyer. New Yorkers have grown used to its baroque splendor by this time, and there must be a hundred theaters of similar pretensions scattered throughout the country. Therefore, its spacious marble floors and lofty domed ceiling, from which are suspended giant chandeliers; its colossal marble columns running to the height of the dome; its heavily upholstered divans, plush carpets, velvet draperies, and massive straight chairs covered in rich damasks and brocades are quite typical of movie theaters everywhere, —and of what is involved in cleanliness maintenance.

It was about 11 o'clock in the morning, a few minutes before the first show of the day. The foyer and lounge rooms were filled with early comers, mostly women and children, waiting for the auditorium doors to open. Some were smoking, some were chewing gum, and a few of the children munched at candy bars. Suddenly the manager grabbed our arm. "Watch," he said, and pointed to a woman sitting in one of the large upholstered chairs. She was daubing at her mouth with lipstick. When she had finished she carefully removed an excess of the cosmetic from the corners of her mouth with the tip of her little finger and nonchalantly wiped it on the upholstery. Two red smudges showed on the green cloth.

"Headache No. 1," said the manager, "women and their confounded greasy lipstick smears! That stuff is hard to remove. Nothing we have tried has been successful. These naphtha and carbon tetrachloride products all leave a ring. Well, I say nothing we have ever tried has been successful until just recently. Last week a fellow came in here with a product he said would never leave a ring or smudge. The stuff looked and smelled like all the others so I didn't get excited about it, but he begged me to try it, so I did. You can tell your readers for me that I never yet turned a salesman down or refused to see him. I'll listen to their story and try their product and if it's better than the one I'm using, we'll buy it, I'll see to that. Just let me give it a fair trial. Anyway, I tried this salesman's stuff and it did all he said it would. No ring, no mark of any kind. So I'm going to give him an order. Anybody who can show me a product that removes lipstick and not leave a ring is my pal." He said he was going to give his "pal" an order for 10 gallons at $4.60 per gallon. "Enough to last a month," was his estimate. He said he never bothered to have any of the products he purchased analyzed, or was he guided by any set purchasing standards. Actual working results were all he was interested in.

Meantime the doors to the auditorium had opened and there was a rush for the best seats. "Now watch the cigarette smokers," said the manager. We did and saw a number of men and women, rather than walk the short distance to the large sand-filled ash receivers nearby, drop their lighted cigarettes to the carpet and stamp them out. "You wonder that I have grey hairs?" he asked. When the lounge rooms and foyer were nearly empty, we made an inspection. In addition to cigarette butts, newspapers, chewing gum wrappers, candy

The multiple cleaning tasks confronting the modern movie theater are well illustrated in this view of the immaculate, carpeted foyer of Radio City Music Hall, New York. Chandeliers, murals, mirrors and acres of carpets all present special problems.

bar wrappers, empty tobacco cans and cigarette packs were strewn about. Four or five thousand people in that short time had littered the place with enough debris to fill a 100-pound bag. He said they collected about twenty such bags in a day.

"There you are," said the manager, "Headache No. 2, the trash people leave behind in a theater. Naturally, you have to expect something, but when the public goes to the movies, it leave all of its manners on the outside. At the end of the day, you can find darn near anything from a button hook to a cigar store Indian. One day somebody left a half a dozen mackerel in a paper bag under his seat. I noticed people avoiding this part of the theater for a dozen seats in each direction. They'd come in and sit down and then they'd get up in a hurry and move somewhere else. I investigated and found these blamed mackerel. Man, I don't wonder people moved." In a case like that, he explained, where an offending odor has been caused, pine oil disinfectant is used. People becoming sick and vomiting in the theater is also a frequent occurrence calling for the use of pine oil disinfectant.

"It's the things people leave behind that you can't see that causes all the trouble," he said. "Like chewing gum, or sticky gum, or sticky candy, lollipops and gum drops. Somebody comes along and sits in a wad of gum or a piece of candy and we get a complaint. Show me the product that will remove sticky stains caused by lemon drops and gum drops and I will pin a gold medal on you. Next to lipstick that is the worst." Chewing gum, he declared, was not hard to remove, although it represents a sizable item in the expenditure of time and labor in the maintenance program. He said he was using a product made with orthodichlorbenzene at present, and that it was cheaper as well as just as effective as carbon tetrachloride. But lemon drops and gum drops,—he was still searching for the answer.

"Now let's forget about all these headache makers," said the manager taking our arm. "I want to show you what I'm proud of." We went to the outside lobby where the tickets are sold. He pointed to a number of rubber mats which, laid together, made a pathway about 30 feet wide from the street right up to the ticket-taker, probably 100 feet. Each mat was about 5 feet wide by 10 feet in length, and an inch thick. "In New York or anywhere, you won't find mats any cleaner," he said. He lifted one by the corner, and pointed out that they were just as clean underneath as on top. He said that it took four men four hours each day to clean the mats. They are taken up each night, carried to the basement and stretched on racks specially built for the purpose, and scrubbed with a trisodium phosphate solution and warm water. He said that trisodium phosphate had been used on the mats for the past two years. (Although we didn't say anything, his statement about the use of trisodium phosphate on the mats differed materially from information which had previously

been obtained from the theater's purchasing agent. That gentleman had said that a potash linseed oil soap was used on the rubber mats, and that trisodium was never used because of its alkali content.) Nothing else, no waxes, no protective coatings of any kind were used on the mats, according to the maintenance manager.

Noticing the brass strip an inch wide which marks the boundary of the area covered by the mats, the long brass double-rails which divide the exits and entrances, and the metal-covered double-doors, we remarked on the amount of elbow grease and polish which must be necessary to keep them all shining so brightly. "Except for the strip along the floor we use no polish whatsoever," was his reply. "About once every six weeks or so we apply a lacquer and that keeps all our doors and rails in first class condition. You see, the one thing responsible for more wear and tear in a movie theater than anything else is perspiration. People with sticky hands pushing against the doors and holding to the hand rails would soon ruin any polishing job. Even the lacquer won't stand up under it for long. See here," and he pointed out several spots on the railing where the lacquer was beginning to wear off. For cleaning the tile floor upon which the rubber mats are laid, ordinary soap powder is used, he said.

At the manager's suggestion, the theater's spacious lobby was next inspected. "Take a look at that floor and tell me if you've ever seen one in better condition," said he. It was a beautiful floor,—pink marble, smooth as silk without being slippery, adding greatly to the theater's suggestion of coolness. "Five days of the week we wash it with ordinary soap powder," he told us, "and on the sixth with trisodium phosphate." His explanation of the change to trisodium every sixth day was that the floor was very porous and absorbed the soap powder which it was necessary to remove by means of trisodium phosphate.

"The lobby of the theater presents our biggest problem," he said. "The chandeliers must be lowered at least once a week and cleaned. The draperies are sent out to the cleaners once every two weeks." He said that dust settled so thickly on all the furniture that they had found wax polishing to be the best means of combating it. Therefore, no oil polishes are used. A new piece of furniture is waxed twice a week for a couple of months and after that only once every

The trash the public leaves behind in a large theater in a day is enough to fill twenty 100-pound bags. Below, an audience of 6,200 persons watches a stage presentation at Radio City Music Hall.

two or three weeks. The use of a feather duster a couple of times a day or so keeps the furniture looking its best. The walls of the lobby are washed down with warm water and flake soap once a week. Because of the rococo decorations of the walls and ceiling, with innumerable scrolls, foliage and delicately executed designs massed together, this task is a difficult one. After the marble surfaces have been cleaned, they are treated with a lacquer somewhat similar to the one used on the brass surfaces already mentioned. The purpose of the lacquer is to preserve a high gloss. The gold plated surfaces at the bases of the marble pillars are simply washed with soap and water and let go at that. No point in gilding the lily.

From the lobby, downstairs to another set of lounge rooms and the theater's lavatories was the next stop on the inspection tour. We entered the men's toilet rooms. "I invite you to tell me that there is an odor here," said the manager. It was more like a challenge than an invitation. "Every piece of equipment in here is cleaned twice a day," he went on. "We use an all-purpose liquid cleanser which cleans and deodorizes. No other deodorizer except the air-washing system is used."

The product of which he spoke was described on the manufacturer's label as an "odorless renovator and bowl cleaner, pipe solvent, disinfectant, and regular cleaning agent." (Quite a product! Editor.) The manager said that a thorough washing once a day of all traps with the product had proved to be more effective than the use of deodorizing blocks. (This practice of eliminating odor by scouring was found to be general only among the larger theaters; in most of the smaller places where the maintenance staff is limited, para blocks are used.) The lavatories were equipped with soap dispensers which dispensed an unperfumed liquid toilet soap.

"Now let's go to the stage," was the next suggestion. There was a vaudeville show in progress, so we stood in the wings. A tap-dancing team was performing. "As you can imagine, the flooring in that stage takes a beating," said the manager. "In addition to keeping it clean from dust and dirt, it must be kept smooth and free from splinters. We use a detergent made from volcanic ash. I think it contains 90 per cent of the volcanic ash and the rest soap. We tried several before we used this one, and this seems to be the best." He said it was sufficiently soft that you could rub it between two pieces of window glass without making a scratch. He did not know what mesh screen it was required to pass through by the manufacturer. "Well, I guess we've about covered everything, unless you've got some more questions?"

"Just a couple. What do you do to remove the odor 6,000 people must leave behind after sitting two hour? Do you use a perfumed spray?"

"No, the air washing equipment takes care of that," was the reply. "We have never used sprays. Maybe some of the theaters do, I don't know. A few years ago I remember it was being talked about, but many of the movies are air-conditioned now and sprays do not seem to be necessary."

"How about your insect problem?"

"What insect problem? If you mean bed bugs, I've never seen

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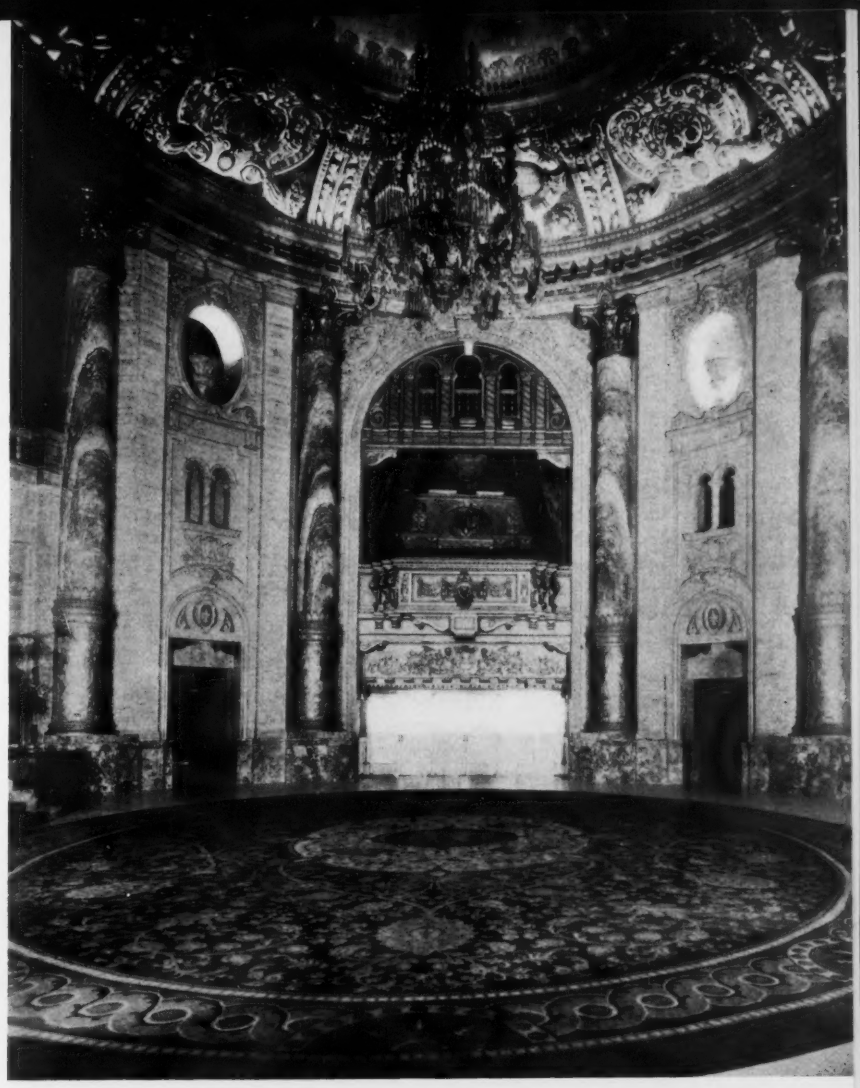

Lobbies and foyers represent the theaters' greatest cleanliness problems. The work of cleaning ornate and intricately designed decorations shown in this view of the rotunda of the Roxy Theater, New York, is never finished.

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ESTABLISHED IN 1798

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Petrodor 19	1.75 per lb.	Petrodor 6559	1.75 per lb.

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How serious a factor can fly annoyance be in reducing milk production? Authorities quoted herein agree that flies do inhibit the milk flow.

Fly Control For Livestock

A discussion of flies causing livestock losses and their control by insecticides and repellents

By Dr. E. G. Thomssen and Dr. M. H. Doner

J. R. Watkins Company

INSECTS were well established on the earth thousands of years before man appeared in his present form. Through their comparatively small size, their astonishing diversity of morphological and physiological specializations, coupled with their ability to multiply rapidly, insects meet with less severe struggles for survival than mammals. As a matter of fact, the advent of man increased rather than decreased the insect horde. He has presented a more favorable environment for those pests which utilize the plants and animals which man requires for his existence. Necessary hosts and food in the completion of the insects' life cycles have been made more available. It is often stated that insects are the chief competitors of man in his struggle for existence. They not only destroy his crops and livestock, but menace the health of both men and animals.

The problem of the menace and control of flying insects (flies) to livestock production in this country will be discussed first. Authorities estimate the loss due to insects at $140,000,000 per year. Flies are responsible for a large part of these losses. It is desirable to list briefly the more common species of flying insects that affect livestock in this country. A number of these affect man as well. These are as follows:

Mosquitoes — (Numerous species of *Culex, Aedes, Anopheles* and *Psorophora.*)

Simuliids (Buffalo Gnats)—*Eusimulium pecuarum, Simulium vittatum.*

Tabanids (Horseflies) — *Tabanus atratus, Tabanus lineola, Tabanus sulcifrons, Chrysops liscalis, Haematopata americana.*

Gastrophilids (Botflies) — Common Cattle Grub (*Hypoderma lineatum*), Northern Cattle Grub (*Hypoderma bovis*), Sheep Botfly (*Oestris ovis*).

Calliphorids (Blow Flies)—Bluebottle Fly (*Calliphora vomitaria*), Screwworm Fly (*Cochliomyia macellaria*).

Sarcophagids (Flesh Flies) — *Sarcophaga tuberosa* var. *sarracenioides, Sarcophaga texana, Sarcophaga robusta.*

Muscids (Houseflies) — House Fly (*Musca domestica*), Stable Fly (*Stomoxys calcitrans*), *Horn Fly* (*Haematobia irritans*), Black Blowfly (*Phormia regina*), Bluebottle Fly (*Lucilia sericata*), *Glossina palpalis, Glossina morsitans, Glossina longipalpis.*

Biological Notes

Mosquitoes.—In spite of their small size, mosquitoes take a heavy toll of livestock during heavy outbreaks. "The results of loss of blood and annoyance to animals", due to these pests, comments Owen (28), "are often of an insidious nature and difficult to detect. In Northern Minnesota during the early spring, mosquitoes frequently become so abundant as to necessitate several applications daily of spray material on dairy cows". Mosquitoes are vectors of equine encephalomyelitis or sleeping sickness among livestock.

Buffalo Gnats. — These tiny creatures develop from larvae living in running water. The gnats, about the size of a mosquito, are vicious biters, and when abundant cause serious injury to livestock, especially horses and mules. Knowlton and Rowe (20) state that the flies become active during the later afternoon when they enter the ears and nostrils of stock. They say further: "Not only is the bite painful, but the punctures remain open, allowing the blood to ooze after the mouthparts have been withdrawn. If disturbed before feeding is completed, the flies will usually fly away and then within a short time return and feed upon the same or a different host".

Horseflies. — Death of livestock resulting from exhaustion and overheating in efforts to constantly ward them off has been reported by Phillip (32). Although such cases are undoubtedly unusual, horseflies are always serious whenever they occur. They attack the neck, shoulders and belly. Horseflies, according to Phillip, may feed continuously for 4 to 6 minutes. This authority further comments: "After feeding to satisfaction, the fly may withdraw and make new stabs, apparently for the pure love of it; in one undisturbed case as many as ten punctures were made in an area of two square inches. Sometimes blood continues to flow freely from the wound, so that the exposed victim in a badly fly-infested region may be literally covered with blood from the bites of these voracious pests".

Their immature stages are spent in an aquatic or semi-aquatic environment, the larvae feeding on other small creatures.

Like mosquitoes, horseflies have been found to be vectors of the following diseases: anthrax, blackleg, anaplasmosis of cattle and several trypanosome diseases (magana, souma, mal de caderas, mbori).

Botflies. — Commonly known as nitflies or gadflies, the botflies are true parasites of horses. They glue their eggs on hairs on the inner sides of the fore legs, around the lower jaw or on the lips, depending upon the species. Upon licking itself, some of these eggs are taken into the mouth and swallowed, except in the case of the throat bot fly whose larvae crawl directly into the mouth. The larvae eventually reach the stomach where they complete development in 8 to 12 months. Mature bots evacuate their host, pupate in the soil and come forth as adults later. Horses infested with bots are unthrifty, undernourished, and subject to frequent attacks of colic. The flies, especially the nose botfly, annoy horses and mules to the extent that they "often rub their noses and lips on fence posts, barbed wire or other sharp objects until those parts are bleeding and sometimes badly injured"(1).

The Nose Bot of sheep has habits that differ somewhat from the foregoing species. The adult, considerably larger than the housefly, deposits its young alive up the nostrils of sheep. The maggots travel up the nares and migrate about the head, usually reaching the sinus cavities where further development takes place. The irritation set up by the activities of the maggots is quite severe. Infested sheep may make vain efforts to dislodge or remove the worms. Nasal discharges become evident, breathing is difficult and a condition known as "blind staggers" frequently results.

Blowflies or Screw-worm Flies. —The status of these pests has been aptly described by Bruce and Sheely (9) as follows: "No other insect affecting wild or domesticated animals is as devastating in its attack nor as deadly in effect. Uncontrolled, this pest is capable of wiping out entire herds of cattle, hogs, sheep, and goats".

Screw-worms develop in wounds or unbroken parts of the skin from eggs deposited on the edges of such places by the adults. Wounds due to barbed wire scratches and cuts, or those incidental to dehorning, castration or severing of navel cord of the newborn, serve as admirable loci of infestation. Even the bites of ticks are asserted to cause vulnerable areas for infestation.

The species of blow fly responsible for the greater number of cases of myiasis are members of the genus Cochliomyia but the flesh flies (Sarcophaga), the green-bottle fly, and several other species of blow flies have similar habits.

Stable and Horn Flies.—The *Stable Fly* has well earned its reputation as one of the foremost nuisances to the livestock industry. It is a vicious biter, several punctures being made with its long, piercing mouthparts during a single feeding. According to Knowlton and Rowe (21), three or four minutes of feeding are required to satisfy and some individuals may feed two times in one day. These investigators have noted that moist straw or hay are ideal breeding places and that females may deposit eggs totaling 600 in number, these being laid in batches during the life of the female. Approximately one month is required to complete a life cycle from egg to adult, although the fly may live several weeks longer.

The adult closely resembles the common housefly but may be distinguished by the interrupted dark lines on the outer margins of the thorax.

Closely related to the Stable Fly is the *Horn Fly*. About half the size of the former, the horn fly derives its name by its habit of remaining at rest on the base of the horn between feeding periods. Emerging as adults from puparia in the soil or manure piles, egg deposition soon occurs and another generation of horn flies is started. Ten to 14

days are required before the adults appear.

Ox Warble Flies.—Any treatment of fly pests of livestock would be incomplete without a consideration of the warble or "heel" flies, reputable one of the serious problems with which the livestockman has to contend. Two species are involved, the "Northern Cattle Grub" and the "Common Cattle Grub".

The adult flies deposit eggs on the heels of cattle (whence the name "heel fly") and, in so doing, greatly annoy the animals, a fact not readily explained inasmuch as the mouthparts are not adapted for inflicting wounds or feeding. Upon hatching, from the eggs tightly glued to the hairs, the larvae or grubs burrow through the skin and between the underlying muscles. The larvae thence wander in the cavities of the body. Eventually the grubs reach the muscles along the spinal cord. Here they encyst, molt several times, and complete their growth, whereupon the grubs evacuate their host and drop to the soil to pupate.

Effects on Livestock

The various types of injury and losses to livestock may be classified as follows:

I. Due to Adult Flies.
   - A. Induced nervousness and irritability of stock, and
   - B. Withdrawal of blood during and following feeding. Consequent effects of A and B are:
     1. Reduced vitality, loss in weight, and general unthriftiness.
     2. Reduction in milk flow.
   - C. Mechanical injuries received as a result of dissipation of energies in trying to escape attack.
   - D. Apparent suffocation (Buffalo Gnats)
   - E. Injection of toxics during feeding (mosquitoes)

II. Due to larvae or grubs.
   - A. Myiasis (screw-worms).
   - B. Infestation of head sinuses (Sheep bot).
   - C. Larvae in stomach and intestines interfere with normal digestion and absorption of food.
     1. Reduced vitality.
     2. Loss in weight.
     3. Failure to finish properly.
   - D. Mechanical transmission of certain livestock diseases.
   - E. Anaphylactic shock of cattle resulting when warble grubs are crushed in the host.
   - F. Defective hides due to punctures of escaping grubs prior to pupation.
   - G. Prohibition of cattle-breeding in certain sections due to screw-worm annoyance.
   - H. Expense of control equipment and materials.

The experience of all picknickers or campers has been that houseflies "bite" before it rains. The insects concerned are not houseflies but stable flies. Those of us who have been irritated by frequent "bites" by stable flies, mosquitoes or deer flies can fully appreciate the sufferings of unprotected livestock besieged with a swarm of biting or sucking flies. In not a few cases such animals become frantic in their futile efforts to escape the flies and an unusually large occurrence of stable flies has been known actually to kill and partly consume range cattle. Bishop (3) records the death in the vicinity of Miami, Florida of 80 cattle, 67 pigs, 3 horses, 1 mule, 20 fowls and 2 dogs by a severe outbreak of mosquitoes (*Psorophora columbiae* Dyar and Knab). Livestock utilize every method to free themselves from flies. Horses and mules stand in positions that supposedly afford some protection from botflies but if in harness, these insects may frequently cause runaways. On other occasions, horses violently rub their noses and lips on objects often severely bruising themselves.

It is difficult to estimate the probable amount of blood capable of being removed from stock by sucking flies. Two species of mosquitoes studied by Stage and Yates (40), (*Aedes vexans* and *Aedes aldriche Dyar and Knab*), were studied in this connection. An average of 500 adults removed 23.93 cc. or 0.03 pint of blood daily from one animal during a single period. Horses and cattle "may literally appear crimson over the sides, neck and flanks, so freely does the blood sometimes flow from the many punctures made by departed (horse) flies", comments Phillip (32).

From the standpoint of the dairyman the chief loss incurred by flies is decreased milk production. Authorities are nearly unanimous in contending that flies do inhibit the milk flow. Owen quotes Washburn (42) to the effect that in 1914 mosquitoes "were so numerous that an increase in the price of milk followed." According to Howard (17), as quoted by Phillip (32) "in places where farmers are trying to build up dairy farms, the presence of these flies (horse flies) has reduced the milk supply as much as 66 per cent in two weeks and in three nearly 100 per cent". Knowlton and Rowe (22) confirm the view that milk cows sharply decline in milk production when subjected to heavy attack by horse flies. Concerning the stable fly, Bishop (2) has this comment: "During severe outbreaks the milk supply in fly-infested zones is much reduced. In the 1912 outbreak many dairymen found that their output of milk was reduced from 40 to 60 per cent and that in some cases cows were completely dried. For several months after the pest had abated, the effects of the outbreak were apparent in the reduced milk production. Even in cows which freshened several months after the pest had abated, the effect on milk yield was said to be apparent".

As a result of carefully controlled tests by Regan and Freeborn (33), stable flies caused a decrease in milk production amounting to a little less than 10 per cent; horn flies, a decrease of only 1.4 per cent. They conclude, therefore, that the popular belief that flies exact a heavy toll from milch cows is somewhat overdrawn and not supported by controlled tests. Other experiments, as those conducted by the Dairy Department of the New Jersey Agricultural Experiment Station, and reported by Nelson (27), confirm the view that

(*Turn to Page* 113)

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Insecticide Marketing Problems

By H. A. Thomas*

Shell Petroleum Corp.

PROBLEMS concerning the marketing of insecticides have been numerous and varied this year. The start of this confusion from a manufacturing standpoint was the rising price of raw materials and, in particular, pyrethrum. Obviously, high ingredient costs have caused insecticide manufacturers to inject every known manufacturing efficiency into their plants. They have also made it necessary for insecticide manufacturers to be better buyers,—pay more attention to the concerns they deal with, and to check carefully the merchandise they receive from these concerns.

Recognizing the foregoing, the insecticide manufacturer today can well appreciate the assistance given him in the past two years by his membership in the National Association of Insecticide and Disinfectant Manufacturers. Of particular assistance are the recent specifications and gradings of insecticide, the revised Peet-Grady test procedure, and the educational material which has been disseminated to all association members on the evaluation of insecticides. No insecticide manufacturer need any longer be in the dark as to the quality and effectiveness of the products he manufactures and sells. Neither need he be in the dark as to the quality of the raw ingredients and their killing power.

At the December convention the opinions of various Government officials were given regarding standards of insecticides coming under their jurisdiction. Committee members, through this association and cooperation, were able to draft a commercial standard for finished insecticides for presentation to the U. S. Bureau of Commercial Standards. Had it not been for the close association of the various special government representatives and those committee members of this association, we probably would not have been able to arrive so quickly at a common ground for specifications and standards. At present, the ballot concerning the commercial standards has been distributed to all interested parties,—both to manufacturers and large volume purchasers of insecticides.

Now that these standards have received well over the necessary majority of ballots in their favor, the insecticide industry is provided with two additional sales supports. First, all Federal, state and municipal agencies, in addition to the majority of large commercial consumer outlets, will recognize our association's specifications and grading standards as a buying guide for insecticides. Second, due to the grades for insecticides in the proposed standards being reduced to three, (i.e., "AA," "A," and "B", equal to the "O.T.I." standard, these three grades being the only ones recognized by the Food and Drug Administration as being of sufficient quality to warrant their being called an insecticide) the marketing of insecticides will narrow down to that particular group. Insecticide manufacturers will ultimately be able to confine their sales efforts to the marketing of those three grades or any particular grade of this group. Further, quotations and inquiries from buyers will naturally narrow down to those grades, which should allow the manufacturer to market them at a more profitable return. Last but not least, the purchaser will be forced to designate which grade he desires in asking for a quotation,—a further distinct advantage.

Many other advantages will accrue from this better understanding and the educational effect it will have on the consumer should prove particularly valuable. Evidence of this need for consumer education is found in the May, 1938, issue of SOAP in an article entitled "Railroad Markets for Sanitary Chemicals." This article exposes the quandary in which most purchasing directors of large industrial plants find themselves when called upon to purchase either insecticides or disinfectants. In fact, it is inferred in this article that there is a growing need for an educational program to be directed to the purchasing and consuming trade that will differentiate insecticides from disinfectants. This was very strongly brought to light during the floods of 1937 when numerous enthusiastic marketers were offering and recommending insecticides to meet disinfecting problems with which only high quality disinfectants could cope. It is true that we have come a long way in the last two years in the way of consumer education. We now have reason to feel that we will advance even more rapidly by reason of the proposed publicity and educational program to be centered around the new standards and testing procedure.

In this connection the writer is recommending to his committee and the board of governors of this association that a small booklet be

(*Turn to Page* 109)

* Report of chairman, Insecticide Marketing Committee, before 24th mid-year meeting National Association of Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 14, 1938.

Ground much Finer to Kill much Faster

NOWHERE in the world will you find Pyrethrum and Derris Powders which are ground finer than those produced by McCormick. The microscopic fineness of these powders means that each ounce is broken up into a vastly higher number of killing particles, which stick more closely to the vital parts of insects, insuring a quicker, surer kill. . . . For further information address: The McCormick Sales Co., Baltimore, Md. In Canada: McCormick & Co. (Canada) Ltd., 454 King St., West, Toronto, Ontario.

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CURRENT LEGISLATION—

A review of legislative developments during the first six months of 1938

By C. L. Fardwell*
McCormick & Co.

OUT of the 55 bulletins sent out from the association office in the first five months of 1938, 36 of these covered legislative matters—and this with comparatively few state legislatures in session (8). In 1939 there will be 44 state legislatures and the Federal Congress in session, which will give some idea of the scope of the work to be covered by this committee next year.

Pennsylvania Insecticide and Fungicide Law. Much time has been devoted to the ruling issued by E. E. Harter, Jr., Director, Bureau of Foods & Chemistry, Department of Agriculture, Harrisburg, Pennsylvania, covering registration by out-of-state manufacturers. As you have been advised, this matter has been the subject of much discussion and correspondence. The association has received inquiries pertaining to this ruling from members and non-members, all asking what procedure out-of-state manufacturers could follow in view of the existing situation. Correspondence was inter-changed with various other trade associations and groups in regard to the matter.

Bulletins to the membership on this subject (to date) totaled six: No. 4, Dec. 22, 1937; No. 9, Jan. 11, 1938; No. 23, Feb. 14, 1938; No. 37, March 16, 1938; No. 39, March 24, 1938; No. 44, April 21, 1938—which will give you an idea of the time spent in trying to obtain from the State of Pennsylvania some sort of definite advice as to how to proceed. Bulletin No. 44, April 21, 1938, summarized the situation and suggested that each member affected select one distributor (a legitimate jobber, or wholesaler, or retailer in Pennsylvania) to serve as agent for the purpose of registration as, in the opinion of our counsel, this one registration is sufficient to legalize the "free sale" of such products or brands by all other distributors. This bulletin also set forth that if any action on the part of the Bureau of Foods & Chemistry should be taken because of failure to effect further registration, our attorney will immediately begin injunction proceedings on behalf of any retailer, wholesaler or manufacturer, as may be necessary to protect the interests of manufacturers among our members.

The legislative committee and counsel discussed at length the advisability of appointing a super-agent or importer to act for all of our members in the state. While entirely possible, so many objectionable features would be involved that, after due consideration, it was decided such a method would be impracticable. In the opinion of counsel, an outside manufacturer might under this plan be required to domesticate and thus become subject to Pennsylvania corporation taxes and regulations.

Federal Legislation

Law (S-1077) *Wheeler-Lea Bill*, amending Federal Trade Commission Act to extend the power of the Commission in its control of advertising became law, effective May 20, 1938. Copy of the law was sent to the association membership on April 4, 1938. This law requires very careful study by every manufacturer since it is interpreted to require that in the case of a compounded drug, or cosmetic, or food, every advertisement shall disclose fully and quantitatively the composition of the article. There is great need for practical guidance in the administration of this law.

Law District of Columbia Revenue Bill (H. R. 10066) became law May 20, 1938. This is known as the bill covering business privilege tax in the District of Columbia and carries a license fee of $10.00 together with a graduated rate of tax on gross receipts in excess of $2,000.

Bills Pending

H. R. 9041 *Trade-mark Bill*: This bill was brought to the attention of the membership with the advice that members write the sub-committee of the Committee on Patents of the House of Representatives as to their position in regard to this proposal.

H. R. 9996: Bill re "authorization of registration of certain collective trade marks." The bill, in full, was sent to the membership on March 29th and has since passed the House, with slight amendments in the references, and a few corrections.

S-5 Food, Drugs and Cosmetic Bill, as you know, passed the Senate and early in May, 1938, a minority report was made by the House. It has been recommended that this bill

* Report of Legislative Committee before 24th mid-year meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 13, 1938.

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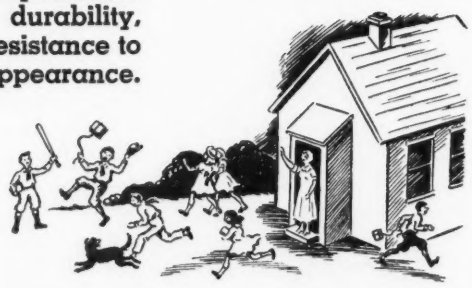

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be passed at this session of Congress and every effort is being put forth to accomplish this.* We have petitioned the committee to include the following amendment, which would give the products of our industry continued control under the present insecticide Act:

"Amend Section 2, Paragraph (h) by adding at the end of line 16, page 4

", except that insecticides and disinfectant products shall be exempt from the provisions of this Act to the extent of the application or the extension thereto of the Insecticide Act of 1910, approved April 26, 1910, as amended (U.S.C. 1934 ed., title seven, secs. 121-134; 36 Stat. 331 et Seq.)"

In an examination of the latest print, we do not find that our exemption has been given consideration*.

Officials of the State Department of Agriculture are most anxious to bring all insecticides under the scope of the Food and Drugs Act. We have been making every effort to keep insecticides under the provisions of the Insecticide Act of 1910 and as amended in 1934.

State Legislation

Your legislative committee considered and called to your attention various state proposals such as the trade-mark legislation attempted by several states—and the possibilities of their doing so in the sessions next year; the food and drug laws that are contrary to the provisions of the present act and the proposed new Federal law; the conversion of protective laws into "money getters"; and various other proposals that might affect the members in their individual businesses and states.

Of these proposals, I wish to point out a few that became law, some that were killed and those that are pending.

LAWS

Kentucky House Bill No. 219: provides that pharmaceutical and proprietary preparations be manufactured under the supervision of a registered pharmacist, or, that the place where such products are manufactured be in charge of a registered pharmacist.

Virginia House Bill No. 169: amends the Virginia Pharmacy Law, placing dentifrices and cosmetics under its provisions and requiring such products be manufactured under the supervision of a registered pharmacist.

Virginia House Bill No. 524: This measure was substituted for the very drastic Va. House Bill No. 171, which was killed. The present law covers drugs and cosmetics and contains many provisions of the 1937 Copeland Bill (S-5 federal food and drugs bill now passed).

DEAD BILLS

Ga. 166x—sales tax on toilet preparations,—died in House.

Ga. 217—restrictive sales measure—died in House.

Mass. H. B. No. 410: provided for local Health Board registration of food and drugs for internal and external use—killed in committee.

Mississippi H. B. No. 595: a drastic revenue bill in the guise of a drugs and cosmetic regulation—died in House.

N. Y. Senate No. 1040: re agricultural poisons—died in Senate.

N. Y. Assembly No. 1450—*Senate No.* 298: toilet preparations tax—killed in Assembly.

N. Y. Assembly No. 928 (later No. 364)—*Senate No.* 594 (later No. 556): an extremely drastic drugs and cosmetics bill—died in assembly.

New Jersey Senate No. 98: This bill you will recall was also presented in last year's session of the New Jersey legislature as NEW JERSEY HOUSE BILL NO. 525, and was sponsored by several trade associations as an amendment to the New Jersey Pharmacy Law to permit less restricted sale of insecticides, disinfectants, and the various products manufactured by members of this association. Unfortunately, this proposal was killed in committee.

In this regard, I wish to call attention to the appointment of a committee by the National Drug Trade Conference to study poison labels and to devise means of offering further protection to the public, etc. This committee, no doubt, will make recomendations that will be given serious consideration by state legislators. It is composed of many technical men. It should be a better-balanced committee and should include representatives of this Association, Associated Grocery Manufacturers of America and the Flavoring Extract Manufacturers Association. Your committee recommends that this subject be discussed at this meeting (June, 1938) and that some action be taken; that President Brenn appoint some one to serve on this committee if it can be arranged.

PENDING BILLS

(Massachusetts, New Jersey and Louisiana in session.)

Mass. House Bill No. 1409: Requiring a poison statement on a package if the contents of the package taken in whole or in part may cause injury. We are advised that the Public Health Committee has been constituted a Recess Committee to investigate and report to the next legislature on this and similar bills.

New Jersey Senate No. 61: Mandatory trade mark bill. This is the bill against which there was such tremendous opposition at the hearings. (Mr. Wilson represented the Association at the hearings.) It was referred back to the committee where it was stated it would "die." No official record as yet as to its final disposition.

*S-5, Federal Food Drugs & Cosmetic Bill has been passed by both houses of Congress and was signed by the President, June 25. The amendment referred to above was not included in the final draft.

Insecticide Marketing Problems

(*From Page* 105)

published by the association concerning the functions of each insecticide and disinfectant manufactured by members of this group. Such a booklet would place household sprays, moth sprays, livestock sprays, and other special varieties of insecticides in their particular categories, would explain in detail how they should be applied, and list their qualifications and limitations. This same sort of treatment could be given the various items coming under the disinfectant group. Members of the association could purchase these booklets, distribute them through their own sales and marketing organization, and by group purchasing could secure them at a minimum cost. In preparing such a booklet, the back cover could be arranged so that it would identify the distributor of these booklets as a member of our Association, give his membership number, and provide a place for him to imprint his concern's trade name, etc.

The writer has had an opportunity to inspect booklets of similar style prepared by some of the pyrethrum importers. These booklets have been very useful and serve as a sample of what can be prepared for both the insecticide and disinfectant divisions of this association.

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3. Balanced fractionation
4. Correct evaporation rate
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STOCKS CARRIED IN PRINCIPAL CITIES

As the Purchasing Agent Sees the SANITARY PRODUCTS INDUSTRY

By Henry B. Abbett*

Purchasing Dept., Purdue University

WHY is it that the sanitary products industry has so frequently been classified as a racket? Why is it that well informed people look upon certain phases of this business as unreliable? What is in the mind of the purchasing agent for sanitary supplies when you approach him with a propsal to try out one of your new or old products?

Generally he recognizes the need of your products, yet his lack of information has been a large contributing factor in establishing many questionable practices in the industry. To the mass of people the sciences are profound mysteries. Anyone who pretends to have a knowledge of the mysterious gains their respect. The way is thus left open for any glib salesman, no matter how ignorant, to mislead the buyer and make a sale of a dishonest product at an exorbitant price. The gullible purchaser will buy, not once, but over and over again, content in ignorance that his judgment is sound and that the product, no matter how worthless, is producing results. Because of some queer streak in human nature, it happens repeatedly that the more farfetched the sales arguments and the higher the price, the easier it is to make a sale.

Fortunately the scene is changing a little today. Some of the mystery is being taken out of the business due to the actions of individuals both inside and outside your industry. One of the most encouraging factors is the growing tendency to employ men who have had technical training for responsible purchasing positions.

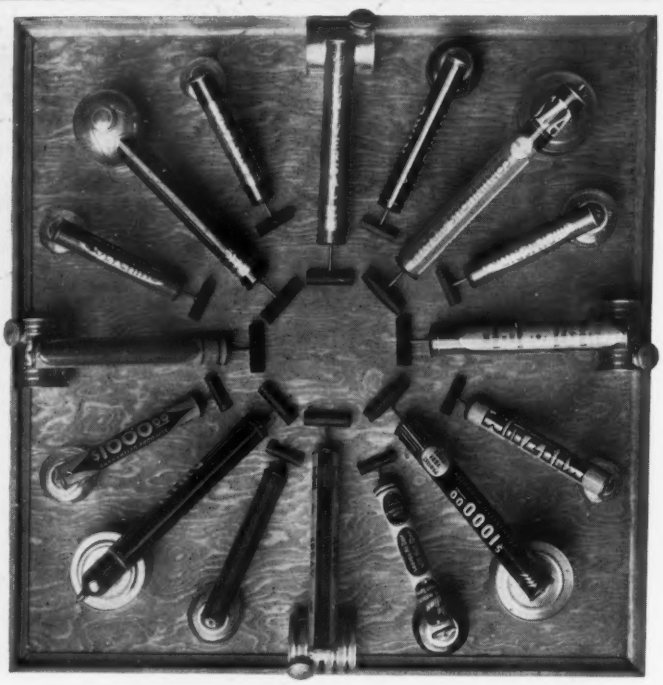
When a new product is being introduced one hears altogether too frequently that its composition cannot be revealed, that the formula is highly complicated and secret, and that only the originator knows how to produce it. This kind of an approach is enough in itself to discredit an industry even though it is not a common practice. Fair-minded men resent such efforts to deceive and cheat, particularly where human welfare is at stake. Anything that is shrouded in mystery and secrecy is unhesitatingly branded as a fake.

Most of us recognize that in practically all instances the ingredients and formulae with which you work — yes, the deep secrets with which the public is all too frequently fooled—are common knowledge. The Federal Government and state agencies have contributed in no small way to this vast accumulation of knowledge and make it available without charge. It is only the unscrupulous who grab at the opportunity for easy profits by changing the simplest things into mysterious compounds.

I am no different than hundreds of other buyers. My files hold many tests which have revealed some new form of dishonesty and trickery. My memory is stored with unpleasant experiences. You know the nature of these, but in case you have forgotten, let me recall that several years ago I was approached to consider a deodorant and disinfectant—it was a secret formula. The agent claimed a phenol coefficient of 7.0 and produced an affidavit purporting to be from a reputable testing laboratory. Several ingenious tests were used to demonstrate its value. Actual laboratory tests proved the material to be a mixture of sodium carbonate and potassium permanganate crystals, and its phenol coefficient was of no significance. This product was priced at $1.10 per pound, yet it could be prepared at a cost under 10 cents per pound by purchasing the ingredients from retail sources. Later I learned that two public institutions, one engaged in handling contagious diseases and the other charged with the protection of the health of children bought heavily and frequently of the product and swore by it. Can you doubt what the final reaction of an informed buyer would be after similar experiences?

FREQUENTLY one hears the argument that "one gets what one pays for." This is not true regardless of the service or the product. Quality and price do not always bear a constant ratio to each other and no one knows this any better than members of the sanitary products industry. Time and time again tests and service show that the lowest priced articles are frequently superior. Business policy, principle and practice are as responsible for a variation in price on identical goods as anything else; and all too frequently these general terms, as they apply to the case in hand, mean nothing more or less than high pressure salesmanship, misrepresentation, questionable advertising and unreasonable profits. There are times when high prices for relatively inexpensive things or services are ac-

* Address before 24th mid-year meeting Natl. Assn. of Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 15, 1938.



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ceptable though never justified—times when certain services or goods are worth a sum entirely out of proportion to their cost. But resentment over such practices backs up the emotions like a dam backs up flood waters.

The buyer is at a loss to find a reasonable cause for this wide fluctuation in price for comparable quality. A variation of as much as 300 per cent is not infrequent. Arguments in defense of such variations on the basis of differences in quality and service do not stand up under test or in practice. Service, like the product itself, can be evaluated and compared and can be standardized within reasonable limits. Unduly high prices indicate usually simply a willingness to take advantage of ignorance, a lack of standards, an overcrowded industry and a tendency to load on all the traffic will bear. On the other hand, buyers do recognize the good intentions of certain elements of the industry and could not under any condition honestly condemn all for the shortcomings of a portion.

The informed buyer is seeking a way out of this dilemma. His first defense is to refuse to buy any product of which a manufacturer is unwilling to reveal the contents; next, he insists upon analyzing and testing in a practical way each product he contemplates purchasing, to determine its value as compared with products of a comparable nature; and last, he seeks the advice and guidance of experts — federal and state agencies, manufacturers—progressive members of your own industry—and is making products to meet the requirements or purchasing them under specifications.

This method of handling sanitary supply purchases will continue until prices become competitive and until there is a marked increase in honesty concerning the exact nature of every product. Certainly there are not many buyers who want to manufacture or even control products which they use, provided that dependability, reasonableness, honesty and legitimacy are integral parts of their purchase contracts. I am confident that most buyers recognize the place of every useful industry in the scheme of things and prefer to buy rather than manufacture.

The promise of the future lies in the adoption of standards of quality, services and practices. The specification plan offers considerable possibilities and the large quantity buyer looks forward to the time when this industry will make it possible for him to buy a large part of his disinfectants, insecticides and maintenance materials by this method. The small user on the other hand is not prepared to check and analyze his purchases; therefore, the best plan for his protection is to place the contents of the container, whenever practicable, on the label.

The consumer's voice has grown louder and quite insistent at times, and rightfully so. Knowledge and organization are valuable instruments if properly used. They are equally effective for buyer or seller.

—— ♦ ——

Fly Control for Livestock

(*Continued from Page* 103)

flies can affect decided losses in total production of milk. Moreover, it was shown that along with reduced milk flow, occasioned by a severe infestation of stable flies, there was a reduction in percentage of butterfat in the milk. Further data on this problem are not available in the literature studied by the writers.

Bloodsucking flies are of further economic importance from the standpoint of their reputed ability to act as mechanical carriers of livestock, as well as human, diseases. Following is a list of flies and diseases transmitted by them:

Mosquitoes
- Malaria
- Elephantiasis
- Yellow Fever
- Equine encephalomyelitis
- Fowl pox
- Tularemia

Horseflies (*Tabanids*)
- Anthrax
- Blackleg
- Trypanosome Diseases (Surra, nagana, souma, mal de caderas, mbori)
- Tularemia
- Onchocerciasis (filial worm disease)
- Infectious jaundice (spirochaete)
- Equine infectious anemia ("swamp fever")
- Dourine
- Anaplasmosis

Stable Fly
- Anthrax
- Infectious anemia
- Surra
- Poliomyelitis or infantile paralysis
- Equine encephalomyelitis

House Fly
- Typhoid Fever
- Tuberculosis
- Diphtheria
- Leprosy
- Gangrene
- Dysentery
- Gonorrhea

(*Methods and products for control will be discussed in the next issue.*)

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Theatre Sanitation Market

(*From Page* 99)

any in this theater, and I never heard of any one that did see any, and we've never had any complaints. We have a contract with an exterminating firm that comes in twice a week and they fumigate (Fumigate? He was not familiar with details. Editor.) the whole auditorium, so if there are any bugs they'd be taken care of."

"How about roaches?"

"Oh, you get an occasional roach now and then in the toilets or down in the basement. Soon as we find any we call the exterminators and they use a spray which soon gets rid of them. We also use roach powder."

"Ever have moths?"

"No, never have any of them either."

"One thing more. How much would you say is spent a year by this theater for the maintenance of sanitation and cleanliness?

"Including wages, about $75,000. I would say about one-tenth of that is spent for materials."

WITH that the tour of inspection and interview with the maintenance manager of one of New York City's largest motion picture theaters came to an end. In many respects it was incomplete (the insect problem, for example, is commonly known to be far greater than the manager's replies would indicate. Why else would it be necessary to have exterminators come in twice a week? At the same time it does give a picture of the typical large theater's problems and needs, of which the lack of information on the side of the management is a significant part. It shows the theater to be a poorly informed buyer of a great many of the products which it uses, and to be badly in need of advice from the far-sighted seller. Right here, it would appear, is another example of that need for closer cooperation and understanding between buyer and seller, which, if supplied, should prove ultimately profitable to both.

That the theaters as a group bulk large as consumers of sanitary chemicals is without question. The theater which has been the subject of this interview alone purchases approximately $7,500 worth of sanitary supplies a year. There are about a dozen large theaters in the borough of Manhattan with similar needs and problems. Also, there are approximately 220 smaller neighborhood movie theaters in the borough, not including the legitimate theaters, which number about 60. In a great number of the smaller neighborhood houses, sanitary conditions can best be described as less than ideal. These places represent a potentially wider market for sanitary chemicals. Particularly is this true in the suburbs where the tone of the neighborhood admits of better conditions, especially in regard to insect control and the use of deodorants.

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News.....

Test Insecticides for Planes

A demonstration was recently conducted by Imperial Airways, Ltd., at Hythe, England, to test the effectiveness of insecticides used aboard planes while in flight, for the control of insects inside the plane. Ten experts were taken for an hour's flight, during which 300 tropical mosquitoes were released within the flying ship. Results showed that the insecticide could be sprayed without inconvenience to passengers while destroying the mosquitoes.

Wants Insecticide Agency

A concern in Istanbul, Turkey, is interested in establishing an agency arrangement for the sale of insecticides of American manufacture. Interested parties may secure further particulars through the U. S. Bureau of Foreign and Domestic Commerce, Washington, inquiry 6685.

J. L. Brenn's Mother Dies

Mrs. Mary Brenn, mother of J. L. Brenn, president of the Huntington Laboratories, Inc., Huntington, Ind. and president of the National Association of Insecticide & Disinfectant Manufacturers, died suddenly on June 21 at her home at Southaven, Michigan. Funeral services were held in Chicago and burial was in the family plot in that city.

Adopt Standard Specifications

The U. S. Department of Commerce, Division of Trade Standards, Washington, has recently announced a recommended and approved list of standard specifications for commercial insecticides and disinfectants. The list, together with the specification numbers, include: Liquid Hypochlorite Disinfectant, CS68-38; Pine Oil Disinfectant, CS69-38; Coal Tar Disinfectant (Emulsifying Type), CS70-38; Cresylic Disinfectants, CS-71-38; Household Insecticide (Liquid Spray Type), CS72-38. The specifications were adopted following signed acceptances from a majority of insecticide and disinfectant manufacturers, and became effective June 10. Copies will be available as soon as they are printed. Inquiries may be addressed to F. W. Reynolds, Division of Trade Standards, U. S. Dept. of Commerce, Washington.

George L. Williams Dies

George L. Williams, 50, president and treasurer of George L. Williams Co., manufacturer of sanitary supplies, Cleveland, died last month. Mr. Williams had formerly been connected with the Cleveland branch of West Disinfecting Co. A widow, two sons and two daughters survive.

O'Connor & Kremp Move

O'Connor & Kremp, sales agents for Bradford-Penn Refining Co. on odorless petroleum oils and naphtha, have moved their offices to 120 Greenwich St., New York, the location of their New York warehouse. The firm was formerly located at 11 West 42nd St., New York.

Lawsons Sail for Honolulu

J. H. Lawson, Federal Varnish Co., manufacturer of floor waxes and floor treating compounds, Chicago, recently sailed from San Francisco for a vacation in Honolulu. He was accompanied by Mrs. Lawson.

Form Chemical Specialty Firm

Morland Chemical Co., chemical specialties, has been formed at Bellaire, O. Morris Lando is president.

Announce New Disinfectant

Baird & McGuire, Inc., Holbrook, Mass., and St. Louis, Mo., have just placed on the market a new disinfectant of the emulsifying type which is said to have an unusually pleasing lilac odor. It will be sold under the name "Bac-Trol." A phenol coefficient of 5 is claimed for the new product, and it is stated that the odor is so pleasant that the material can be dilute with water and used as a theatre spray deodorant. It is also claimed that "Bac-Trol" is non-toxic, non-corrosive, non-irritating, non-caustic and non-poisonous, that it does not deteriorate with age or lose its fragrance. The new product is not a synthetic, but is made from natural materials. It will be sold only through the wholesale and jobbing trades.

Name Sales Head

McAleer Mfg. Co., Detroit, manufacturer of automobile polish, has named C. J. Kennedy as sales manager.

McCormick Pitcher to Giants

John Wittig, formerly star pitcher for the McCormick & Co. team in the Baltimore industrial baseball league, has been purchased from the Baltimore Orioles by the New York Giants for delivery to the National League champions next fall. Wittig who several years back developed into the star hurler of the Baltimore Industrial League under the guidance of A. Edison Badertscher, manager of the McCormick team, was signed up by the Orioles two years ago and has had an unsually successful career in professional baseball thus far. He is 23 years of age and a native of Baltimore. Two other players who have developed into stellar material under Mr. Badertscher are Charles Harris, former pitcher for the McCormick & Co. team, now pitching for the Baltimore Orioles, and T. Sparra, former 2nd baseman for the McCormick team, now playing with Trenton.

Offer New Germicide

Givaudan - Delawanna, Inc., New York, have just announced development in their research laboratories of a new germicide and fungicide which will be offered as Stabilizer G4-50. A phenol coefficient of 57 against *E. typhi* (F.D.A. Method) is claimed for the new product. It is said to be water-soluble, non-irritating to the skin and relatively non-

BREUER'S TORNADO ELECTRIC SPRAYERS

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Automatic Time Switch—Volume Air Control

One Gallon Capacity, 1-3 H.P. G. E. Universal Motor

½ H.P. G.E. MOTOR
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
COMPRESSOR TYPE
1 GALLON CONTAINER

Here is the finest sprayer ever built. Similar to the now widely used Tornado Model 54 and retaining the automatic time switch, volume air control and adjustable nozzle features, the new Model 36 will spray a big volume of insecticide great distances in finest gas formation.

The patented principle of heating and compressing material does the trick. Just the sprayer you need for covering large distances and penetrating with the finest gas every possible source of insect existence.

Get the facts on this sprayer before buying!

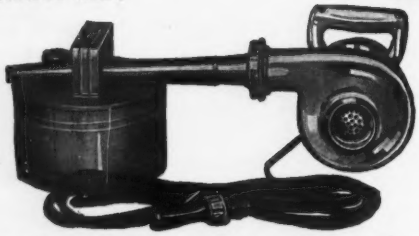
Also most complete line of electric sprayers to meet every spraying problem.

ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
1 QUART CONTAINER

MODEL 54—1 QT. CAPACITY

It features an automatic time switch set at any point from 1 to 30 minutes — sprays desired amount without any attention whatever — automatically shuts off. Can also be used for hand spraying. Adjustable nozzle can be set for spraying in any position. Also exclusive volume control adjustment permits spraying one ounce every two to four minutes with either fine or heavy spray. MODEL 53 same as Model 54 except does not have automatic time switch.

Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8′ to 10′. ⅙ H.P. G.E. Universal Motor, 1 pint glass jar. 20′ of rubber covered cable.



Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18′ to 20′. 1/3 H.P. G.E. Universal Motor. Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions. Write today for complete description and circulars.

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toxic, especially in the low concentrations of practical use. It is intended for use in the production of aqueous antiseptic solutions and in the preservation of adhesives, pastes, hides, dextrine, albumen, etc.

Fabrite Asks Correction

Fabrite Products Co., Baltimore, reported in the May issue as having changed its firm name, which had been A Line Products Co., would like to correct the statement contained in the report that it manufactures sanitary products. "We do not handle what are usually known as sanitary products," reads the letter, "but devote our efforts to chemical specialties used in the automotive trade, such as upholstery cleaner, re-dyes and polish."

Parke, Davis to Enlarge Plant

Parke, Davis & Co., Detroit, have announced a $1,000,000 construction program to increase the production capacity of their Detroit plant. A new manufacturing unit will replace several old buildings which are being razed. Present plans call for completion before the year ends.

Criticizes Dairy Article

Pointing out inaccuracies which appeared in a discussion on the "Dairy Market for Sanitary Chemicals" in the last issue of SOAP, H. W. Koch, president of The Diversey Corp., Chicago, has communicated as follows with the editor:

"While we have read, with much interest, the article entitled 'Dairy Market for Sanitary Chemicals,' contained in the June, 1938, issue of SOAP, we call to your attention an omission which we feel should be corrected. In the last column on page 107, you state as follows: This dairy uses '70,000 pounds of sterilizer, about 97 per cent trisodium phosphate and 3 per cent sodium hypochlorite.' Such a composition is covered by letters patent owned by ourselves, and partially describes our product, *Diversol*. In fact, the purchases mentioned above are actually for *Diversol*, although the composition given is wrong.

Superior Products Co., Dallas, Texas, has recently introduced "Toes Up" insect spray. The package is by Phoenix Metal Cap Co., Chicago. Photograph by Heetfield-Tillou.

"We believe that the statement quoted above may well encourage your readers in the mixing of sodium hypochlorite solutions with trisodium and other phosphates. This is an infringement of our patents. We feel that you will not wish to encourage your readers in such practice, nor that they would wish, knowingly, to infringe our rights. We will, therefore, appreciate your incorporating this advice in your next issue."

Glickman Consulting Chemist

Charles S. Glickman, formerly chief chemist for the Baldwin Laboratories, Saegertown, Pa., in charge of their wax and polish laboratory, has announced that he is now engaged in private consulting work for manufacturers of waxes, polishes, and allied products. His address is 220 Broadway, New York.

Increase Insecticide Output

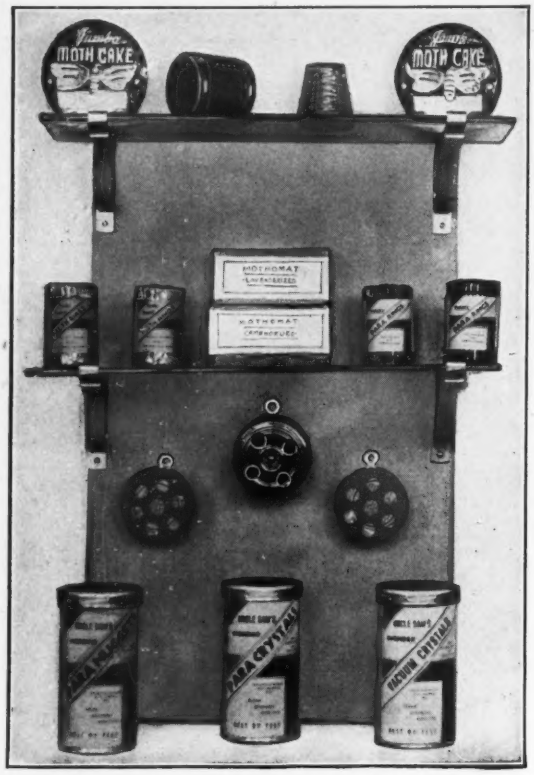
Establishments in Canada, which make insecticides as their chief product, reported to the Dominion Bureau of Statistics that the gross value of their output in 1936 was $1,043,503; this included $823,738 for insecticides and $219,775 for weed-killers, disinfectants, and other products. The total Canadian output of insecticides in all industries was $1,075,735 in 1936, compared with $1,017,581 in 1935.

McCormick Holds Sales Meeting

McCormick & Co., insecticides, Baltimore, held a series of conferences for division managers of the firm last month at Baltimore. The program included the presentation of new policies and the discussion of sales problems and selling methods. The conferences are a part of the multiple management plan, inaugurated by Charles S. McCormick, president of McCormick & Co.

Plan Drug Exhibit at Fair

Plans for a drug and pharmaceutical exhibition at the New York World Fair in 1939 were laid before a group of manufacturers and wholesalers of drug products at a meeting held in the Hotel Biltmore, New York, June 10.



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This new dispenser is sturdy and attractive, and at the same time foolproof, unbreakable and rustproof—eliminating complaints from users on these scores. It requires no special tools to install and can be adjusted easily to discharge various quantities of soap. Will not clog.

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West Official Gives Sales Talk

C. D. Cox, district manager of the Dallas branch of West Disinfecting Co., was one of the principal speakers at the recent convention of the National Federation of Sales Executives, held in Dallas. He spoke on the factors necessary in the development of effective sales training programs, stressing the importance of greater attention given to selling power, rather than buying power, as the basis of successful sales campaigns.

How Hard Do Termites Bite?

George E. Sanders, entomologist, Sanders-Durling Entomological Service, New York, appeared as one of the principal witnesses recently in a claim for compensation brought by a building superintendent who alleged that he had been bitten so severely by termites in the course of his work that he was forced to enter a hospital, thereby losing two weeks' work, and suffering no end of inconvenience and distress. Mr. Sanders said that in his opinion a Northern termite could not bite hard enough even to penetrate the skin. The superintendent said that the one that bit him had no trouble. The N. Y. State Industrial Board referee reserved decision on the claim. How hard can a termite bite anyway?

Sanitary Assn. Names Officers

New officers and directors elected at the recent Pittsburgh convention of the National Sanitary Supply Association, in addition to President R. L. Johnson, Nashville Products Co., Nashville, Tenn., whose election was reported last month, are: Maurice E. Rudin, Iron City Wiping Materials Co., Pittsburgh, vice president; S. J. Bockstanz, Bockstanz Bros. Co., Detroit, treasurer; Edmund C. Kratsch, Milwaukee, secretary; E. A. Stanford, City Janitor Supply and Brush Co., St. Louis; C. C. Keck, C. C. Keck Co., Pittsburgh; and J. H. Zucker, State Chemical Mfg. Co., Cleveland; directors. Directors elected by the associate group were: Joseph Fuld, Fuld Bros., Baltimore, chairman; Arthur E. Rozin, Loroco Industries, Inc., Reading, O.; Marshall L. Magee, T. F. Washburn Co., Chicago; and Ben Slicting; Hercules Powder Co., Milwaukee.

The associate directors of the group, with the approval of the active membership, appointed themselves a committee on membership for the purpose of building up the active roster of the association. To finance the drive, associate members voted to contribute $50 each. The project was adopted as an activity independent of the active association, and separately financed, but with the understanding that it conforms with the association's constitution and by-laws.

Fuld Bros. Offer New Products

Fuld Bros., Baltimore, are bringing out two new sanitary products for the trade. One is a metal polish called "Brevitee." It is being distributed in a special introductory offer of four free 1-gallon cans with each order of twenty-four 1-gallon cans received. The other product is "Swish," advertised as the "new short-cut to perfect streakless wall cleaning." "Swish" is being offered in 55 gallon drums and 1-gallon cans.

Colombian Insecticide Imports

The South American country of Colombia imported 1,000,037 gallons of insecticides and disinfectants in 1937, which was 270,079 gallons more than in 1936. The United States was the chief supplier, with 500,600 gallons. The United Kingdom was next, with 286,283 gallons, then Germany, 54,474 gallons, and Japan, with 26,917 gallons. Other countries, unnamed, contributed the balance, 131,863 gallons.

Adopt Summer Schedule

Federal Varnish Co., Chicago, will close its factory and office on Saturday during the summer months. No shipments will be made on Saturdays, beginning July 2 and ending September 3, it is announced. Customers are requested to anticipate requirements with the Saturday closing in mind.

Sustain Cube Patent

The validity of the William J. Dennis patent covering use of cube, either in powder or extract form, as an insecticidal ingredient, was upheld in a decision by Federal Judge Geiger, June 3, in the U. S. Federal Court, Milwaukee District. The suit was brought by Mr. Dennis, American Cube Syndicate and American Crop Protection Co., against Agicide Laboratories, Milwaukee for infringement. The testimony of the plaintiffs showed that timbo from Brazil is the same as cube from Peru and is covered by patents. The ruling was that cube sold under any other name, such as timbo, is still cube, and covered by patents. A comprehensive licensing plan with the principal distributors of cube products is practically completed and will be announced shortly.

Insecticide Postal Ruling

Paragraph 4 (aa) of section 588 of the U. S. Postal Laws and Regulations, edition of 1932, has been amended to read as follows:

"Insecticides, fungicides, and germicides not outwardly or of their own force dangerous or injurious to life, health, or property, and not in themselves unmailable (see secs. 569 and 598), shall be admitted to the mails for transmission in the domestic mails when securely packed for safe transmission. Provided, that the container of the article mailed is plainly labeled to show its contents, is also marked "Poisonous Composition," and bears the label or superscription of the manufacturer thereof. (See par. 4 (f) of sec. 590 as to packing.) Poisonous preparations, such as raticides, for the extermination of rodents and other destructive mammals are not included in the above classification and are not mailable."

The new ruling differs from previous ones by the addition of the last sentence which prohibits the mailing of preparations destructive to mammals.

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MORTOLIN
the
Ideal Mothproofing Compound
Oil Soluble Non-Poisonous

MORTICIDE
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Tested Bed Bug Concentrate
Odorless Efficient

Send for Samples and Complete Information

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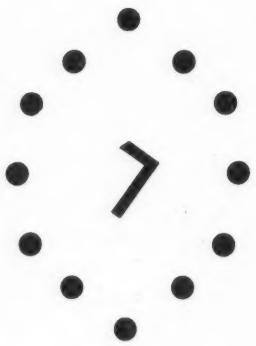

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A. J. Marcuse Dies

A. J. Marcuse, Vice-President of West Disinfecting Company, Long Island City, and active in the Company until the time of his death, died June 29, 1938, at his home, 555 Park Avenue, New York City. He was 73 years old and had long been associated with the sanitary products industry. Funeral services were held at Temple Emanuel, New York.

Name Senn Kessler Agent

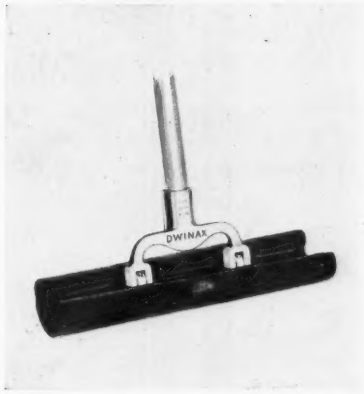
George Senn, Philadelphia, oils and naval stores, has been appointed agent in metropolitan Philadelphia for Kessler Chemical Corp., a wholly owned subsidiary of American Commercial Alcohol Corp. L. C. Harvey, Jr., who has been associated with American Commercial Alcohol Corp. as branch manager of its Philadelphia and Baltimore offices for the past eight years, will be in charge of the division. The Kessler line consists of "Kesscocide 95," a new synthetic insecticide, and lacquer solvents, plasticizers, glycolglycerine esters, fatty acid esters, and other chemicals.

Offer New Low-Cost Odor

Givaudan - Delawanna, Inc., New York, have recently introduced a new odor for polishes, adhesives, etc., under the name "Savarome No. 2." The new odor originally worked out for use in inexpensive hand soaps, has definite advantages over wintergreen and sassafras, it is claimed, in pungency and lasting quality of odor.

New Baldwin Wax Applicator

A new type applicator for applying self-polishing and non-rubbing waxes has been developed by Baldwin Laboratories, Saegertown, Pa. The applicator has been designed particularly for use with "Dwinax Self-Polishing Wax," made by the company. It is built on a rocker principle, which, it is claimed, enables easy diffusion and fast-spreading of liquid type waxes on floors. The rocker action, it is said, permits the spreader part of the applicator to follow the motion of



the stroke and thus eliminate streaking and overlapping marks. The fabric part is of rubber-backed mohair, and during the pushing motion operates on the same principle as a squeege window cleaner, while during the pulling motion it is said to act as a spreader and to place a thin coating of wax on the surface. The applicator is made in two parts with a spring base, permitting the removal of the mohair for cleaning or changing.

New England PCA Amends

The New England Pest Control Association adopted a revised constitution and by-laws at its meeting held in Boston last month. Following that action, the association resumed its discussion of the past several months on the subject of classified telephone listings. Majority sentiment was for the heading "Exterminating and Fumigating," with all other headings omitted except for cross reference listing. William O. Buettner, secretary of the National Pest Control Association was a guest at the meeting.

Hercules Issues Folder

Hercules Powder Co., Wilmington, has just published a folder describing its "D.H.S. Activator," recently introduced to insecticide manufacturers to stabilize pyrethrum base insecticides and increase their killing power. Copies available on request.

Join Associated Exterminators

The Associated Exterminators and Fumigators of New York, through their secretary, W. J. Parker, announce the following new members: Sidney Wimer, Majestic Exterminating Co.; William J. Shrimplin, Rose Rat Exterminator Co.; and William A. Elliott, Original Roach Exterminator Co. The board of directors of the association recently voted to give its support and cooperation to the National Pest Control Association during the annual national convention to be held in New York in 1939.

Wax Container in New Design

Windsor Wax Co., New York, has redesigned its "Windsor Paste Wax" containers to conform with the new modern design of its "Windsor No Rubbing Liquid Wax" package. The new design allows for larger and clearer type, and less advertising copy.

FTC Charges Zonite

Unfair competition in the interstate sale of liquid and powder moth repellents is alleged in a complaint filed recently against Zonite Products Corp., manufacturer of "Larvex" moth-killer, New Brunswick, N. J., by the U. S. Federal Trade Commission.

Address Change an Error

Mystic Foam Corp., sanitary products, Cleveland, advises that the notice of a change in the company's address which appeared in last month's SOAP was in error. Mystic Foam Corp. has not moved, and remains at 6607 Carnegie Ave.

Felton Names Canadian Agent

Felton Chemical Co., Brooklyn, has appointed Lewis-Adcroft Co., Montreal, to act as its Canadian representative. Lewis-Adcroft will carry a complete line of Felton aromatics, raw materials and flavoring materials for distribution in the Dominion.

Agicide Laboratories Move

Agicide Laboratories, formerly at 108 N. Water St., Milwaukee, has moved to 4668 N. Teutonia Ave.

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Deodorant Blocks

Deodorant blocks sold in England are generally based on naphthalene, which can be readily melted and cast. Pine oil is added to the molten naphthalene in a suitable proportion either alone or fortified with rosin spirit, creosote oil, eucalyptus oil, Russian turpentine etc. This type of block is suitable for hanging in a confined space and acts as a deodorant. The odor of naphthalene is apt to cover that of pine and if the latter is desired, pine fluid may be absorbed in blocks of fibrous or porous material. Such a product loses its activity much more rapidly than the naphthalene block.

A soluble disinfectant block may be compounded from pine oil soap and naphthalene. As a basis for experiment, melt 12 pounds of naphthalene and add 2½ pounds of soft soap together with 2½ pounds of pine oil. Stir well, cool, color and cut into blocks. Such a block will slowly emulsify in water, giving a good deodorant solution. Alternatively, rosin soap may be used in place of soft soap. In this case the rosin oil is saponified in the presence of the other ingredients with 50 per cent caustic soda solution at 180° F. with vigorous stirring. One hundred parts of rosin oil require 28 parts of caustic soda solution. *Manufacturing Perfumer* **3,** 130-1 (1938).

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Determination of Rotenone

Rotenone crystals are colorless when extracted but soon become colored and lose their toxicity when exposed to air. The solubilities of rotenone at 20°C. are 73.4 per cent in chloroform, 19 per cent in trichloroethylene, 15 in benzene, 7 in acetone, 0.4 in ether, 0.6 in carbon tetrachloride and 0.2 per cent in alcohol. Rotenone is almost completely extracted and changes very little in ether, which is the best solvent for extracting and testing rotenone.

To determine rotenone, extract 5 grams of the powdered material with ether, filter and evaporate. Add 15 cc. of cold ether to the extract in a crystallizing dish and put in the refrigerator for 24 hours. Crystals of rotenone are deposited. Decant the solvent into a second crystallizing dish and wash the crystals by decantation with more cold ether. Add the wash liquor to the solvent. Keep the solvent and wash liquor in the refrigerator for 24 hours. Absence of crystals assures the complete crystallization of the rotenone in the first crystallizing dish. Dry the crystals at 50°C. Their weight multiplied by 20 equals the percentage of pure rotenone. A. Guillaume and A. Proeschel. *Rev. botan. appl. agr. trop.* **17,** 737-43; through Chem. Abs.

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Criticize Phenol Coefficient Test

The phenol coefficient as an index in the relative evaluation of antiseptics has many limitations, according to Max S. Marshall writing in *Hospitals* **2,** 44-8 (1938). Such indexes must be obtained under highly standardized artificial conditions and different compounds vary widely in the degree of change in antiseptic activity with deviations from the standard conditions. It is proposed instead that studies be made of what each antiseptic may be expected to accomplish under various given conditions. Factors which should be considered are the influence of organic matter such as sputum, blood, food etc.; the influence of concentration; of metals, salts, acids, alkalies, oxidizing agents, reducing agents; the action on cotton, silk, wool, dyes, paints, metals etc.; the toxicity toward the mucous membranes, normal skin, injured skin; the effect on spores; the effect on various types of bacteria etc.

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Suggest Spray for Seedlings

J. G. Horsfall and R. F. Suit, of the Agriculture Experiment Station at Geneva, N. Y., suggest that seedlings grown in greenhouses and subject to leaf diseases and damping-off be sprayed at weekly intervals with red copper oxide, 1 lb. to 50 gals. of water. Since red copper oxide is difficult to suspend in water, a suspensible grade has been worked out—Curocide 54—to be used at 1½ lbs. to 50 gals. of water, or 1½ ozs. to 3 gals. of water. However, seeds must also be protected against preemergence damping-off with red copper oxide, zinc oxide or semesan.

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Practical Disinfectant Test

A practical method for testing nonphenolic disinfectants was devised with a view to reproducing as closely as possible conditions encountered in cleaning the woodwork of the sickroom. The method developed was:

A painted or varnished stick 8 x 4 x 100 mm. is immersed for about 15 seconds in a culture of *Staphylococcus aureus*, placed on a recently flamed and cooled wire gauze, and allowed to remain exposed to the air for 72 hours. It is then immersed completely for 30 seconds in the highest dilution of the disinfectant that is recommended for disinfecting the woodwork in the sickroom,—transferred to a dry, sterile, medication tube that is closed with a cotton plug and inverted. After 1 hour the stick is placed in a tube of sterile broth, stirred for 30 seconds, transferred to a second tube of sterile broth and stirred for 30 seconds. The whole procedure is carried out simultaneously with 3 painted and 3 varnished sticks, and all 12 tubes of broth are incubated for 48-72 hours and examined for growth.

The object of the second subculture is to render the disinfectant too dilute to inhibit the growth of *S. aureus.* If growth occurs in all of the second subculture tubes, the dilution of the disinfectant used has failed to kill the test organism. If growth occurs only in 1 or 2 of the second subculture tubes, contamination may have occurred. Make an agar slant streak, incubate 24-48 hours and examine. If the organism is not *S. aureus*, contamination has occurred; if it is *S. aureus* the test must be repeated as this organism may or may not be a contamination. The method is limited to testing nonphenolic disinfectants which do not depend on a volatile constituent and which are odorless. In use, the disinfectant must not be washed off the woodwork for several days. Wm. C. Clark. *J. Am. Pharm. Assoc.* **27,** 130-2 (1938); through Chem. Abs.

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(*From Page* 53)

357,186. Insecticide. Hammond Paint & Chemical Co., Beacon, N. Y. Filed Jan. 11, 1938. Serial No. 401,779. Published March 8, 1938. Class 6.

357,215. Antiseptic Powders. Valentine Laboratories, Inc., Chicago. Filed Jan. 24, 1938. Serial No. 402,282. Published March 15, 1938. Class 6.

357,261. Soap. Lloyd Soap Co., New York. Filed July 30, 1937. Serial No. 395,830. Published March 22, 1938. Class 4.

357,299. Scouring Soap. Holbrook Mfg. Co., Jersey City, N. J. Filed Dec. 9, 1937. Serial No. 400,642. Published March 22, 1938. Class 4.

357,303. Toilet Soaps. Kerk Guild, Inc., Whitesboro, N. Y. Filed Dec. 17, 1937. Serial No. 400,975. Published March 22, 1938. Class 4.

357,307. Dry Cleaner. Winthrop and Ward, Inc., New York. Filed Dec. 21, 1937. Serial No. 401,124. Published March 22, 1938. Class 4.

357,320. Cleaning Fluid. La Maison Products, Inc., New York. Filed Jan. 10, 1938. Serial No. 401,742. Published March 22, 1938. Class 4.

357,418. Cleaning Compound. J. B. Ford Co., Wyandotte, Mich. Filed July 31, 1937. Serial No. 395,860. Published March 29, 1938. Class 4.

357,523. Shaving Soap. McKesson & Robbins, Inc., Bridgeport, Conn. Filed Dec. 22, 1937. Serial No. 401,161. Published March 29, 1938. Class 4.

357,555. Detergent. General Chemical Co., New York. Filed Jan. 7, 1938. Serial No. 401,665. Published March 29, 1938. Class 4.

357,596. Dry Cleaning Aid. Midland Chemical Laboratories, Inc., Dubuque, Ia. Filed Jan. 22, 1938. Serial No. 402,231. Published March 29, 1938. Class 4.

357,703. Compound Having Water Softening and Germicidal Properties. Calgon Inc., Pittsburgh. Filed Aug. 10, 1937. Serial No. 396,222. Published March 29, 1938. Class 6.

357,710. Chemical for Cleaning Traps of Toilets. Home Helpers Co., Buffalo. Filed Sept. 20, 1937. Serial No. 397,601. Published Feb. 15, 1938. Class 4.

357,713. Antiseptic Oils for Sunburn. McKesson & Robbins, Inc., Fairfield, Conn. Filed Oct. 7, 1937. Serial No. 398,253. Published Jan. 4, 1938. Class 6.

357,719. Treatment for Athlete's Foot. J. D. Compound Co., Lake Forest, Ill. Filed Oct. 23, 1937. Serial No. 398,860. Published March 15, 1938. Class 6.

357,723. Bath Salts. Phosphate Mining Co., New York. Filed Nov. 9, 1937. Serial No. 399,515. Published March 1, 1938. Class 6.

357,729. Germicide. Cascade Sprayer Co., Seattle. Filed Nov. 17, 1937. Serial No. 399,824. Published March 29, 1938. Class 6.

357,735. Fly Spray. National Co - Operatives, Inc., Indianapolis. Filed Nov. 24, 1937. Serial No. 400,118. Published Feb. 8, 1938. Class 6.

357,751. For Treatment Athlete's Foot. Dixie Specialty Co., Tampa, Fla. Filed Dec. 10, 1937. Serial No. 400,742. Published March 22, 1938. Class 6.

357,780. Shampoo. Andrew J. Weber, Milwaukee. Filed Jan. 3, 1938. Serial No. 401,513. Published March 22, 1938. Class 6.

357,781. Refrigerator Deodorant. Darco Corp., Wilmington, Del. Filed Jan. 4, 1938. Serial No. 401,523. Published March 29, 1938. Class 6.

357,837. Dentifrice. Drummer Boy Dental Products Co., St. Louis. Filed Feb. 3, 1938. Serial No. 402,638. Published March 29, 1938. Class 6.

New Chlorine Disinfectant

An aqueous solution containing 1 part of iodine in 50 parts of a 4 per cent potassium iodide solution, —and dettol, which is a chlorine derivative of *m*-xylenol, are used as disinfectants. A 2-minute treatment of rubber gloves heavily infected by streptococci gave complete sterility from nonsporing organisms with the aqueous iodine solution, with dettol, undiluted or as a 30 per cent paste, with 1 part in 50 of Lysol, or with 1 part in 250 of mercuric iodide. H. Berry. Pharm. J. **139,** 541, 571-2.

Cotton Oil Stocks

Stocks of crude cottonseed oil on hand in the United States as of May 31st, 1938, totaled 87,418,499 lbs., as compared with 49,141,043 lbs. on the same date in 1937.

I. & D. Meeting at Wawasee

(*From Page* 93)

Pittsburgh to make his competitors in the insecticide business look silly. Wally replied that he did not need either horses or horseshoes to do this, and forthwith announced Messrs. Newell and Arehart the champs.

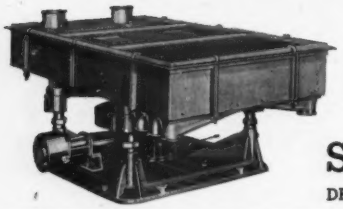
A special cruise on Lake Wawasee was included in the sports program. The sloop, "Pyrethrin II" captained by Grant Dorland, engaged in fancy and varigated sailing for several days, carrying a special racing crew which included Al Bevernick, first mate; Harold King, second mate; Mike Lemmermeyer, chief steward; Walter Andree, chief jib hoister, and Al Pillet, chief ballast, and others of lesser importance. Finding no competition on the lake, they raced against time, making a complete circuit of the nine mile lake in ten hours flat, including stops for refreshments.

A number of those attending the meeting rode horseback at the breeding farm of R. O. Jackson of West Disinfecting, located some twenty miles from Lake Wawasee as guests of Mr. Jackson. The official registration list follows:

Ahles, H. J., John Powell & Co.
Albert, Talbot J., Black Flag Co.
Allen, W. W., Dow Chemical Co.
Alwyn, T. E., American Can Co.
Arehart, Geo. H., Universal Metal Products Co.
Armstrong, J. L., Rex Research Co.
Baird, Gordon M., Baird & McGuire, Inc.
Badertscher, A. Edison, McCormick & Co.
Batchelder, R. M., Dr. Hess & Clark, Inc.
Bell, S. H., S. H. Bell Co.
Benedict, S. D., Midway Chemical Co.

Better Sifting—Better Mixing

Insure the Uniformity of Your Product; Stop Dust Losses; Protect Employees' Health with Dust Tight Sprout Waldron All Steel



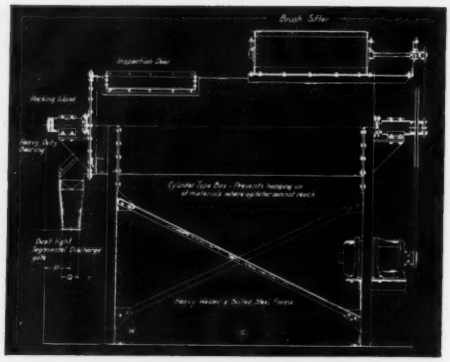
← Perfect Circle Sifter and Cylindrical Sure Mix

Insecticide Mixer →

Details on Request

Sprout Waldron & Co.

DEPT. 3 MUNCY, PA.



F. & S.

Quality Colors *for* TOILET SOAPS LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.

205 FULTON STREET
NEW YORK, N Y.

Import—Manufacture—Export

If you manufacture products containing alcohol

Write us about

TONKAIRE

A new synthetic specialty which eliminates the sharp odor of alcohol

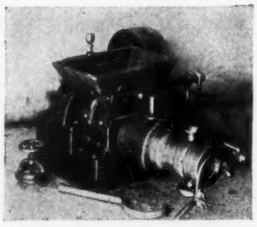
We shall be pleased to forward a sample and full information

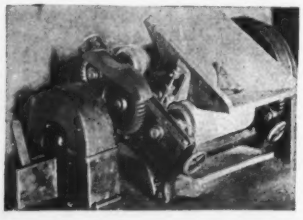
COMPAGNIE PARENTO, Inc.

Croton-on-Hudson New York

LABORATORY MILL AND PLODDER

Showing a very successful laboratory mill and plodder capable of producing a very nice-looking cake of soap weighing 2½ oz., measuring 3¾" long, 1⅝" wide and 1" thick. The mill is equipped with Quincy Granite rolls 4½" in diameter, 12" long. The plodder has a 3¼" diameter screw and is equipped with a cutting-off device and has an electric heating element to heat the water contained in the cup.





We also build a hand lever press to place on a bench with power enough to bring up the finest engraving on a set of dies. Dies may have a renewable set of letters and numbers so that each experimental lot may be marked as desired.

HUBER MACHINE COMPANY

Makers of good soap machinery for over 40 years

265—46th STREET BROOKLYN, N. Y.

Berry, Hugh R., Shell Petroleum Corp.
Bevernick, A. W., R. J. Prentiss & Co.
Bjork, R. W., L. Sonneborn & Sons, Inc.
Bovier, L. S., Hooker Electrochemical Co.
Brand, Edgar E., L. Sonneborn Sons, Inc.
Brenn, J. L., Huntington Laboratories, Inc.
Breuer, A. A., Breuer Electric Mfg. Co.
Bush, Ralph N., Dodge & Olcott Co.
Campbell, Charles G., John Powell & Co., Inc.
Campbell, F. L., Ohio State University
Carpenter, Jas. H., Koppers Co.
Clore, W. K., Ohio Corrugating Co.
Cooper, H. D., Koppers Co.
Cortilet, M. P., American Can Co.
Cowin, R. O., Standard Oil Co., Ohio
Curlett, John N., McCormick & Co., Inc.
Dailey, C. E., Atlantic Refining Co.
DeLacy, J. H., National Can Corp.
DeLaney, M. E., Halowax Corp.
Dolge, K. A., C. B. Dolge Co.
Dorland, Grant A., "SOAP."
Dumas, C. J., Rohm & Haas Co.
Duncan, John, Jr., Owens-Illinois Can Co.
Dunnican, W. J., Reilly Tar & Chemical Corp.
Elliott, F. R., F. E. Meyers Bros. Co.
Fabry, Alexander, American Disinfecting Co.
Fenn, John F., Continental Can Co.
Flanagan, M. J., Federal Varnish Co.
Fletcher, Fred., Dow Chemical Co.
Frankenhoff, E. T., Dicalite Co.
Fuld, Melvin, Fuld Bros.
Furst, C. W., Furst-McNess Co.
Gauer, J. A., Fritzsche Bros., Inc.
Goltermann, Carl A., Williams Sealing Co.
Gothard, M. J., Sinclair Refining Co.
Grant, Walter, Ohio Corrugating Co.
Grady, A. G., Sinclair Refining Co.
Hadfield, W. A., General Laboratories, Inc.
Hamilton, H. W., White Tar Co. of N. J.
Kratsch, E. C., National Sanitary Supply Association.
Lange, H. W., Williams Sealing Corp.
Lawrence, F. L., Atlantic Refining Co.
Lawson, John H., Federal Varnish Co.
Leath, Louis, Sinclair Refining Co.
LeGear, H. E., Dr. L. D. LeGear Medicine Co.
Lemmermeyer, M., Aromatic Products, Inc.
Lindabury, Richard N., Rohm & Haas Co.
Linneen, H. W., Sinclair Refining Co.
Loris, Paul F., H. D. Hudson Mfg. Co.
Lowenstein, Leo, D. A. Collins Mfg. Co.
Lum, Dudley F., Givaudan-Delawanna, Inc.
Lynch, D. W., John Powell & Co.
Magee, M. L., T. F. Washburn Co.
Mider, V. W., U. S. Chemical Co.
Hanley, C. A., Felton Chemical Co.
Heller, Preston B., B. Heller & Co.
Hill, D. W., Williams Sealing Corp.
Hillman, E. H., Standard Oil Co.
Hogg, G. F., Hercules Powder Co.
Huckins, F. O., Sinclair Refining Co.
Husen, Werner R., Commerce Petroleum Co.
Jackson, R. O., West Disinfecting Co.
Janney, W. R., National Can Co., Inc.
Jones, Lester, W., McCormick & Co.
Kampmeier, A. G., Rohm & Haas Co.
Kelly, James, L. Sonneborn Sons, Inc.
King, G. S., Standard Container, Inc.
King, Harold R., R. J. Prentiss & Co.
Klock, F. F., McLaughlin Gormley King Co.
Moburg, H. W., Rex Research Corp.
Moran, J. P., Wilson & Bennett Mfg. Co.
Morgan, Thomas, "SOAP."
Morrison, Alan W., Socony-Vacuum Oil Co.
Mueller, John, Rohm & Haas Co.
Mueller, Robert M., Rohm & Haas Co.
Murphy, D. F., Rohm & Haas Co.
Murray, Chris., Baldwin Laboratories, Inc.
MacNair, Ira P., "SOAP."
McDonnell, C. C., Food & Drug Administration.
McGovran, E. R., Bureau of Entomology.
McLaughlin, G. A., McLaughlin, Gormley, King Co.
Nelson, Franklin C., Stanco, Inc.
Nelson, Henry, Chemical Supply Co.
Nelson, John, Selig & Co.
Newell, Frank M., Universal Metal Products Co.
Noble, Harold, S. B. Penick & Co.
Peterson, D. W., American Can Co.
Philbrick, Burton G., Skinner & Sherman, Inc.
Pillet, A., E. I. DuPont de Nemours & Co.
Pollnow, Wm. E., Vestal Chemical Co.
Powell, John, John Powell & Co.
Rauch, Fred F., S. B. Penick & Co.
Reddish, G. F., Lambert Pharmacal Co.
Reilly, James J., Black Flag Co.
Reynolds, F. W., National Bureau of Standards.
Roark, R. C., U. S. Dept. of Agriculture.
Sanders, J. G., Sun Oil Co.
Sankowsky, N. A., Stanco, Inc.
Seguin, C. A., Huntington Laboratories, Inc.
Simanton, W. A., Gulf Research & Development Co.
Simmonds, G. L., U. S. Sanitary Specialties Corp.
Skinner, J. C., Williams Sealing Corp.
Smith, C. E., Socony-Vacuum Oil Co.
Smith, F. D., Monsanto Chemical Co.
Smith, H. V., H. V. Smith & Co.
Solinsky, R. S., National Can Co.
Stevenson, R. M., Givaudan-Delawanna, Inc.
Stewart, James K., Anderson-Prichard Oil Corp.
Sullivan, W. N., U. S. Dept. of Agriculture.
Swanson, E. F., Sinclair Refining Co.
ter Horst, W. P., United States Rubber Co.
Thomas, Harold A., Shell Petroleum Corp.
Thomas, Wallace, Gulf Oil Corp.
Thompson, Friar, Hercules Powder Co.
Thomson, Dick, Ohio Corrugating Co.
Thomssen, E. G., J. R. Watkins Co.
Tiddy, F. X., Black Flag Co.
Trevisan, L. A., American Can Co.
Van Ameringen, A. L., Van Ameringen-Haebler, Inc.
Van Dyne, C. S., American Disinfecting Co.
Vance, M. B., Givaudan-Delawanna, Inc.
Varley, Jack, Baird & McGuire, Inc.
Wagner, W. J., Tanglefoot Co.
Weed, Alfred, John Powell & Co.
Weed, W. J., Niagara Alkali Co.
Wehmer, J. E., E. I. DuPont de Nemours & Co.
Weingard, A. B., Pennsylvania Refining Co.
Weirich, Clarence L., C. B. Dolge Co.
Woodbury, E. N., Ohio State University.
Wotherspoon, R., Derris, Inc.
Wright, John H.
Young, R. H., Davies-Young Soap Co.
Zick, W. J., Stanco, Inc.

GUESTS

Mr. Henry B. Abbett, Purchasing Agent,—Purdue University, Lafayette, Ind.
Mr. A. G. Burks, Purchasing Agent,—Indiana University, Bloomington, Ind.
Dr. F. L. Campbell, Associate Professor Entomology,—Ohio State University, Columbus, O.
Professor J. J. Davis, Chief in Entomology,—Purdue University, Lafayette, Ind.
Mr. Carl W. Dipman, Editor,—PROGRESSIVE GROCER, New York City.
Dr. George W. Hoover,—Washington, D. C.
Dr. C. C. McDonnell, Chief, Insecticide Division, Food & Drug Administration, U. S. Department of Agriculture, Washington, D. C.
Dr. E. R. McGovran, Bureau of Entomology & Plant Quarantine, U. S. Dept. of Agriculture, Beltsville, Maryland.
Mr. F. W. Reynolds, Division of Trade Standards, National Bureau of Standards, U. S. Dept. of Commerce, Washington, D. C.
Dr. R. C. Roark, in charge Insecticide Investigations, Bureau of Entomology & Plant Quarantine, U. S. Dept. of Agriculture, Washington, D. C.
Professor E. M. Searles, Entomologist, University of Wisconsin, Madison, Wis.
Mr. W. N. Sullivan, Bureau of Entomology & Plant Quarantine, U. S. Dept. of Agriculture, Beltsville, Maryland.
Mr. W. N. Woodbury, Ohio State University, Columbus, Ohio.

LIQUIDATING

MACHINERY AND EQUIPMENT

J. T. ROBERTSON CO. SYRACUSE, N. Y.

ATTENTION SOAP & SANITARY PRODUCTS MANUFACTURERS!

This is one of the finest soap plants we have ever liquidated. The machinery and equipment is all of recent design and in excellent condition. Don't miss this opportunity to fill your soap machinery requirements at a small fraction of the usual cost.

Outstanding Bargains from Robertson Plant

Wurster & Sanger Complete Double Effect Glycerin Evaporator

J. M. Lehmann 5 Roll Water Cooled 16" x 40" Steel Polishing Mill

Proctor & Schwartz Soap Chip Dryer 48" Single Roll

Proctor & Schwartz Soap Chip Dryer 36" Single Roll

Proctor & Schwartz Soap Chip Dryer 5 Cooling and Crushing Rolls

3 Jones Automatic Soap Presses

Ferguson & Haas Automatic Wrapping Machine

3 Blanchard No. 14 Soap Powder Mills

2 Shriver Filter Presses 30" x 30" 42 Plates

Pneumatic Scale Corp. Automatic Can Filler

2 Pneumatic Scale Corp. Automatic Filling and Weighing Machines with Top and Bottom Sealers for Filling Soap Chips and Powders into Packages

3 H-A Automatic Cutting Tables

2 H-A Automatic Slabbers

2 H-A Jumbo 10" Plodders

2 H-A Preliminary 8" Plodders

2 H-A Amalgamators

8 H-A Crutchers

6 H-A 4 Roll Granite Toilet Soap Mills

2 Dopp Crutchers

200 Soap Frames

3 Bliss Sealers

Also Kettles, Tanks, Machine Shop Equipment, Barrel Fillers, Pumps, Motors, Etc.

We invite your inspection and inquiries. All machinery and equipment is priced for immediate sale.

NEWMAN TALLOW & SOAP MACHINERY CO.

1051 W. 35th ST., CHICAGO, ILLINOIS

OUR FORTY YEARS SOAP EXPERIENCE CAN HELP SOLVE YOUR PROBLEMS

Classified Advertising

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Soapmaker—German, 28 years' experience. Can make any kind of hard, soft, potash soaps and powders. Has also great knowledge of toothpaste and creams. Address Box No. 428, care *Soap*.

Sales Manager—Man with exceptionally good record for the past six years handling the sales of sanitary supplies and specialties for two large companies to the institutional trade and jobbers, is open for a new connection where the prospects are good. Has covered the trade from coast to coast and completely familiar with the business. Address Box No. 426, care *Soap*.

Perfumer—Man with twelve years' experience in perfuming, cosmetics, sanitary specialties, soaps and allied products is open for a new position. Has also had some sales experience in this field and is well known in the essential oil and allied trades. Address Box No. 427, care *Soap*.

Soapmaker—With many years of practical experience; can make any kind of soap; also polishes, disinfectants, good formulas. First-class references. Looking for steady position. Address Box No. 425, care *Soap*.

Soap Chemist, girl, perfect in all soap analyses; also experienced in practical soapmaking and development, desires position with large concern. Address Box No. 417, care *Soap*.

Chemist—Man with twenty-five years' practical experience in soaps, cosmetics, oils, fats, etc., having been connected with several large companies, is open for employment or consultation one or two days each week. Opportunity for small manufacturer to obtain expert assistance at reduced expense. Address Box No. 421, care *Soap*.

Chemist, Ph.D.—Thorough chemical and engineering training. Twelve years' executive duties. Extensive experience with disinfectants, antiseptics, detergents, and insecticides. Interested in development and production. Address Box No. 401, care *Soap*.

Capetown, Calcutta, Tsientsin or Hoboken

Far or near we're ready to serve you with CONSOLIDATED'S Guaranteed Good Rebuilt Soap Machinery.

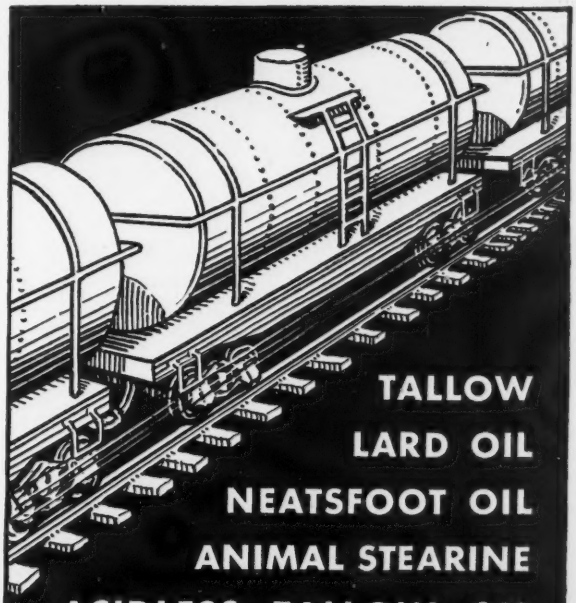
Selected Specials

2—Blanchard No. 10 Soap Powder Mills.
4—Steel Wool Mfg. Machines, complete.
3—Automatic Soap Wrapping Machines, electric glue sealers, adjustable.
1—Jones automatic soap Press.
2—Pneumatic Scale Carton Pk'ging Units.
1—Proctor & Schwartz Soap Chip Dryer, steel frame, 72" Apron, with 5-roll P. & S. Mill.
10—Rotex Sifters, 20"x48" screens, single deck, motor driven.

Crutchers
Soap Kettles
Powder Mixers
Granite Mills
Plodders
Slabbers
Foot and Automatic Soap Presses
Cutting Tables
Pulverizers
Soap Pumps
Soap Chippers
Filter Presses
Soap Frames
Powder Fillers
Labellers
Tanks
Boilers

Send for Illustrated Soap Bulletin

CONSOLIDATED PRODUCTS CO., INC.
15-21 PARK ROW NEW YORK, N. Y.
BArclay 7-0600 Cable Address: Equipment
We buy your idle Machinery—Send us a list.



TALLOW
LARD OIL
NEATSFOOT OIL
ANIMAL STEARINE
ACIDLESS TALLOW OIL

Prompt Delivery—Drums, Barrels, or Tank Cars.

INDEPENDENT MANUFACTURING CO.
Bridesburg P. O. Philadelphia, Pa.

Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 136 for page numbers. *"Say you saw it in SOAP."*

ALKALIES

John A. Chew, Inc.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Solvay Sales Corp.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Associated Chemists, Inc.
Baird & McGuire, Inc.
Buckingham Wax Corp.
Candy & Co.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Exterminating Materials Co.
Federal Varnish Co.
Fuld Bros.
Harley Soap Co.
Koppers Co.
Kranich Soap Co.
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Shawmut Specialty Co.
Sweeping Compound Mnfrs. of N. Y.
Uncle Sam Chemical Co.
T. F. Washburn Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American-British Chemical Supplies
John A. Chew, Inc.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
E. M. Sergeant Pulp & Chem. Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
Baird & McGuire, Inc.
T. G. Cooper & Co.
Innis, Speiden & Co.
Koppers Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Pylam Products Co.

CONTAINERS and CLOSURES

American Can Co. (Tin Cans and Steel Pails)
Anchor-Hocking Glass Corp. (Closures & Bottles)
Continental Can Co. (Tin Cans)
Hazel-Atlas Glass Co. (Bottles and Jars)
National Can Co. (Cans)
Sutherland Paper Co. (Packages)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.

ESSENTIAL OILS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Felton Chemical Co.
Firmenich & Co.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

INSECTICIDES, SYNTHETIC

Kessler Chemical Co.
Rohm & Haas Co.

(*Continued on page* 134)

Sales Executive desires to connect with manufacturer or refiner. Twenty-two years' experience in mineral oils, insecticides, chemicals, aromatics. Address Box No. 406, care *Soap.*

Chemist—Man with twenty years' experience, ten of which has been in soaps, oils, detergents, cleaners, etc., desires new connection with preferably small or medium size company. M.I.T. graduate in chemical engineering. Address Box No. 405, care *Soap.*

Positions Open

Wanted: Important firm of toilet soaps and cosmetics desires manager for establishing own sales organization for renowned products in Great Britain. Capable persons conversant with toilet soaps and cosmetics and having capital are invited to address detailed offers stating past experience to Box No. 418, care *Soap.*

Wanted—Experienced soap and insecticide salesman for Chicago and surrounding territory; good opening for a high-grade man who can produce. Address Box No. 422, care *Soap.*

Miscellaneous

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Complete Soap Plant Equipment for Sale: Proctor soap chip dryer; automatic soap press; wrapping machine; 4 roll stone mills; foot press; plodders 6", 8", 10"; soap boiling kettles; 6 knife chipper; two-way cutting table; frames; filter presses; crutchers; mixers, boilers. Stein Equipment Corp., 426 Broome St., New York City.

"Non-Rubbing Wax"—For canners and jobbers. Highest Gloss you ever saw at the Lowest Price you've heard. Just send for a free sample and compare. Carter-Reid Company, P. O. Box 65, Roxbury Crossing Station, Roxbury, Mass.

Volcanic Ash of all colors and grades; samples and prices upon request. Mid-Co. Products Company, Kansas City, Missouri.

Non-Skid No-Rubbing Wax—A remarkable product. A large board of education reported it less slippery than any other wax. A national chain of stores had it approved by their insurance company. Sample it yourself. Low prices. Twi-Laq Chemical Co., 221 Sullivan St., Brooklyn, N. Y.

We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

It will pay you to send for testing samples.

PYLAM PRODUCTS CO., INC.

Manufacturing Chemists, Importers, Exporters

799 Greenwich St. New York City

Cable Address: "Pylamco"

Use Our "MOPCO" 65% T. F. A.

Boiled Down

COTTON SEED SOAP

To make better Soap Powder at lower cost

MURRAY OIL PRODUCTS CO.

INCORPORATED

21 WEST ST., NEW YORK

Raw Material and Equipment Guide

(*Continued from page* 132)

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 136 for page numbers. *"Say you saw it in SOAP."*

MACHINERY

J. H. Day Co. (Mixers, Sifters, Mills)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
Ingersoll Steel & Disc. Div. Borg-Warner Corp.
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc)
Stokes & Smith Co. (Packing Machinery)
Viking Pump Co. (Pumps)
Wurster & Sanger (Soap, Oil and Glycerin)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator)
Anchor-Hocking Glass Corp. (Metal Caps)
T. G. Cooper & Co. (Waxes)
Dicalite Co. (Insecticide Carrier, Filtering Materials, Abrasives)
Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
Exterminating Materials Co. (Exterminators' Supplies)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants and Waxes)
Koppers Company (Coal, Coke, Roofing Materials)
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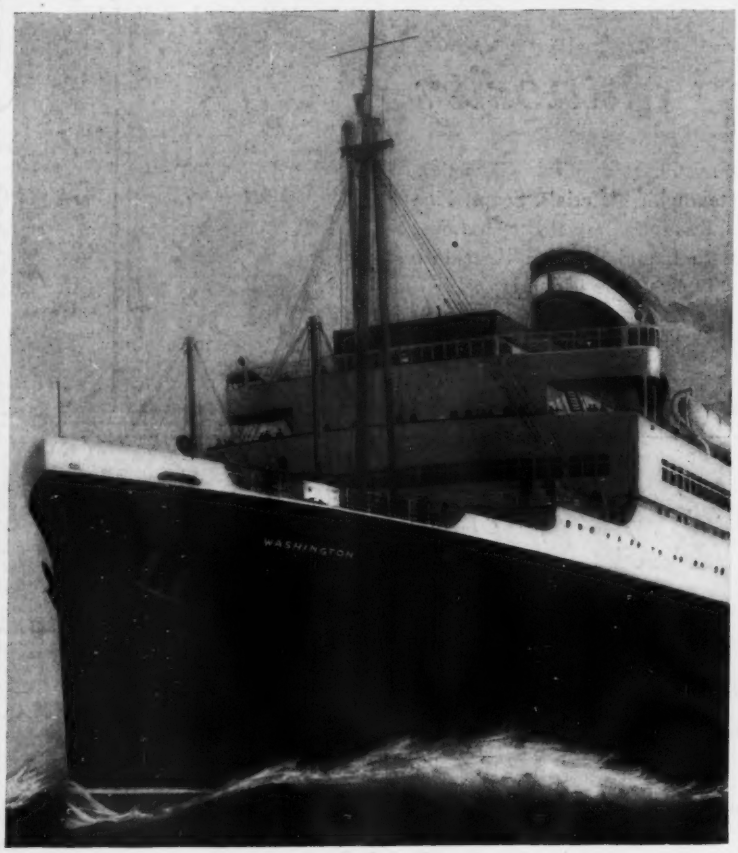

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Tale Ends

JUDGING from the actions of the security markets, business improvement is not a great way off. Wall Street is usually quick to sense a change in trend and never bashful in climbing on the band wagon. Some industrial groups are already beginning to feel expansion in demand,—and when Uncle Sam really gets to work spending that big wad of money, things are really liable to happen.

◆

One of the best conventions ever held by the National Association of Insecticide & Disinfectant Manufacturers was that at Lake Wawasee, Indiana, recently. Attendance was at a high level, . . . and the wanderers who frequently sneak away to pick up a stray order when meetings are held in large cities, had no place to wander, so they stayed put . . . in the meeting sessions. Score one for the meeting place out in the sticks as against the large city.

◆

This hot, humid weather we have been having is not so bad after all. Interpret it in terms of more bugs, meaning more demand for insecticides; more sanitation problems, meaning more need for disinfectants; more baths, meaning more soap consumed; summer clothes, also meaning more washing and more soap used. Look at it from this angle, and it is not nearly so hard to take!

◆

Incidentally, we pause to announce that there are still a limited number of 1938 BLUE BOOKS remaining to be presented free to new subscribers to *Soap* or to old subscribers who have not as yet sent in their renewal checks. The best condensed catalog of useful and usable information yet published for the soap, sanitary products, and chemical specialty industries,—that's the 1938 BLUE BOOK. If you want one, send in that subscription now,—$3.00 per year. Don't wait too long, like many people did last year, until the supply of BLUE BOOKS is sold out!